

## Federal Operating Permit Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Mohawk Industries, Inc.
Facility Name:	Lees Carpets Division
Facility Location:	404 Anderson Street Glasgow, Virginia
Registration Number:	80269

<u>Permit Number</u>	<u>Effective Date</u>	<u>Expiration Date</u>
VRO80269	December 19, 2006	December 18, 2011

Significant Modification Date: July 25, 2007

Amy T. Owens  
Regional Director

July 25, 2007  
Signature Date

Table of Contents, 2 pages  
Permit Conditions, 81 pages  
Source Testing Report Format  
Attachment A - Multicyclone CAM Plan, 2 pages  
Attachment B - Hazardous Air Pollutants, 6 pages  
40 CFR 63, Subpart OOOO

## Table of Contents

<b>I.</b>	<b>FACILITY INFORMATION .....</b>	<b>4</b>
<b>II.</b>	<b>EMISSION UNITS .....</b>	<b>5</b>
<b>III.</b>	<b>FUEL BURNING EQUIPMENT REQUIREMENTS – (B5, B6 AND B7).....</b>	<b>8</b>
A.	LIMITATIONS .....	8
B.	PERIODIC MONITORING .....	9
C.	COMPLIANCE ASSURANCE MONITORING (CAM) .....	11
D.	RECORDKEEPING.....	11
E.	TESTING .....	13
F.	REPORTING.....	13
<b>IV.</b>	<b>PROCESS EQUIPMENT REQUIREMENTS – COAL HANDLING (CH1 – CH5).....</b>	<b>14</b>
A.	LIMITATIONS .....	14
B.	MONITORING AND RECORDKEEPING .....	15
C.	TESTING .....	16
<b>V.</b>	<b>PROCESS EQUIPMENT REQUIREMENTS – YARN DYE LINES (YD1 – YD5).....</b>	<b>17</b>
A.	LIMITATIONS .....	17
B.	MONITORING .....	19
C.	RECORDKEEPING.....	26
D.	TESTING .....	29
E.	REPORTING .....	29
<b>VI.</b>	<b>PROCESS EQUIPMENT REQUIREMENTS – CARPET BACKING LINES (LCS, VAES, PVC1, PVCS, HM1, HMM, RHMM AND HMS) .....</b>	<b>30</b>
A.	LIMITATIONS .....	30
B.	MONITORING .....	34
C.	RECORDKEEPING.....	38
D.	TESTING .....	39
E.	REPORTING .....	40
<b>VII.</b>	<b>HAZARDOUS AIR POLLUTANT CONDITIONS – PRINTING, COATING, AND DYEING OF FABRICS AND OTHER TEXTILES .....</b>	<b>41</b>
A.	LIMITATIONS .....	42
B.	MONITORING .....	43
C.	RECORDKEEPING.....	62
D.	REPORTING .....	65
<b>VIII.</b>	<b>FACILITY WIDE CONDITIONS - HAZARDOUS AIR POLLUTANTS.....</b>	<b>71</b>
A.	LIMITATIONS .....	71
B.	MONITORING AND RECORDKEEPING .....	71
C.	REPORTING .....	72
<b>IX.</b>	<b>INSIGNIFICANT EMISSION UNITS.....</b>	<b>73</b>
<b>X.</b>	<b>PERMIT SHIELD &amp; INAPPLICABLE REQUIREMENTS.....</b>	<b>74</b>
<b>XI.</b>	<b>GENERAL CONDITIONS.....</b>	<b>75</b>
A.	FEDERAL ENFORCEABILITY .....	75

B.	PERMIT EXPIRATION .....	75
C.	RECORDKEEPING AND REPORTING .....	76
D.	ANNUAL COMPLIANCE CERTIFICATION .....	77
E.	PERMIT DEVIATION REPORTING.....	78
F.	FAILURE/MALFUNCTION REPORTING .....	78
G.	SEVERABILITY .....	78
H.	DUTY TO COMPLY .....	78
I.	NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE .....	79
J.	PERMIT MODIFICATION .....	79
K.	PROPERTY RIGHTS .....	79
L.	DUTY TO SUBMIT INFORMATION.....	79
M.	DUTY TO PAY PERMIT FEES.....	79
N.	FUGITIVE DUST EMISSION STANDARDS .....	80
O.	STARTUP, SHUTDOWN, AND MALFUNCTION .....	80
P.	ALTERNATIVE OPERATING SCENARIOS .....	80
Q.	INSPECTION AND ENTRY REQUIREMENTS .....	81
R.	REOPENING FOR CAUSE .....	81
S.	PERMIT AVAILABILITY .....	82
T.	TRANSFER OF PERMITS.....	82
U.	MALFUNCTION AS AN AFFIRMATIVE DEFENSE.....	82
V.	PERMIT REVOCATION OR TERMINATION FOR CAUSE.....	83
W.	DUTY TO SUPPLEMENT OR CORRECT APPLICATION.....	83
X.	STRATOSPHERIC OZONE PROTECTION .....	84
Y.	ASBESTOS REQUIREMENTS .....	84
Z.	ACCIDENTAL RELEASE PREVENTION.....	84
AA.	CHANGES TO PERMITS FOR EMISSIONS TRADING .....	84
BB.	EMISSIONS TRADING .....	84

## **I. Facility Information**

### **Permittee**

Mohawk Industries, Inc.  
404 Anderson Street  
Glasgow, Virginia 24555-2801

### **Responsible Official**

Lane Leonard  
Senior Director of Division Manufacturing

### **Facility**

Lees Carpets Division  
404 Anderson Street  
Glasgow, Virginia 24555-2801

### **Contact Person**

Dennis Dickison  
Plant Engineer  
540-258-2811 Ext. 370

**County-Plant Identification Number:** 51-163-0001

**Facility Description:** NAICS 314110 - Carpet and Rug Mills

Mohawk Industries, Inc. - Lees Carpets Division operates a nylon carpet manufacturing facility in Glasgow, Virginia. Activities of the facility to support the carpet manufacturing production process include fuel burning and coal handling, yarn dyeing, yarn processing, carpet backing and ancillary operations such as storage silos.

## II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Fuel Burning Equipment</b>							
B5	B5	Babcock and Wilcox Boiler (installed before 1972)	120 MMBtu/hr	-	-	-	-
B6	B6	Babcock and Wilcox Boiler (installed before 1972)	72 MMBtu/hr	-	-	-	-
B7	B7	Erie City VC Boiler (1978)	155 MMBtu/hr	Two (2) Zurn multicyclones	B7	PM/PM-10 and Lead	2/13/78 Amended 2/16/78
<b>Coal Handling</b>							
CH1	-	Railcar Shaker (1980)	120,000 lbs/hr	-	-	-	-
CH2	-	Coal Bucket Elevator (1980)	120,000 lbs/hr	-	-	-	-
CH3	-	Storage Pile Transfer (1980)	120,000 lbs/hr	-	-	-	-
CH4	-	Coal Storage Pile (1980)	5,000 tons	-	-	-	-
CH5	CH5	Coal Storage Silo (1980)	120,000 lbs/hr (500 tons storage)	Wet Suppression	CH5	PM/PM-10	-
<b>Yarn Dye Lines</b>							
YD1	YD1-1&2	#1 Ilma Line	3,900 lbs yarn/hr	-	-	-	12/10/99 Amended 6/29/06
	YD1-3						
YD2	YD2-S2	#2 Ilma Line	1.85 tons of dyeing solution per 1.54 tons of fabric per hour	-	-	-	12/12/90
	YD2-D1						
	YD2-D2						
YD3	YD3	Ilma Sample Line (1992)	300 lbs yarn/hr	-	-	-	-
YD4	YD4	Lanly Dryer	600 lbs yarn/hr	-	-	-	7/10/86 Amended 6/29/06

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
YD5	-	Pack Kettles (Total of 8) (1952)		-	-	-	-
<b>Carpet Backing Lines</b>							
LCS	LCS	Latex Calcium Carbonate Filler Silo (constructed before 1972)	60,000 lbs/hr	Fabric Filter	LCS	PM/PM-10	-
SBRM		SBR Latex Mixer (constructed before 1972)	-				
VAES	VAES	VAE Latex Filler Silo	130,000 lbs/hr; 4,420 TPY	Ultra Industries Fabric Filter Model #CBVC 7-36-11	VAES	PM/PM-10	12/5/97
VAEM		VAE Latex Mixer	-				
PVC1	PVC1	PVC Carpet Backing Line	1,800 yd <sup>2</sup> /hr	Ceco Twin Pack Fiber Bed (Coalescing Filter)	PVC1	PM/PM-10	3/22/02 Amended 6/29/05, 8/31/06 and 2/12/07
PVCS	PVCS	PVC Silo	60,000 lbs/hr; 42,000 TPY	Ultra Industries Fabric Filter by IMH	PVCS		
HM1	HM1- PC and HM1- MC	Hot Melt Line (1975)	5,600 yd <sup>2</sup> /hr	-	-	-	-
HMM	HMM	Hot Melt Mix Tanks (2) (1975)	68,000 lbs/8 hrs total	Fabric Filter	HMM	PM/PM-10	-
	HMM- vent	Hot Melt Mix Tanks - Vents (2) (1975)		-	-	-	-
RHMM	RHMM	Remote Hot Melt Mix Tank (1989)	68,000 lbs/24 hrs total	Walton Stout Fabric Filter	RHMM	PM/PM-10	-
	RHMM- vent	Remote Hot Melt Mix Tank - Vent (1989)		-			-
HMS	HMS	Hot Melt Sample Line	1,333 yd <sup>2</sup> /hr	-	-	-	8/12/02 Amended 6/29/06

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Miscellaneous</b>							
DINP1 and DINP2	-	Diisononyl phthalate Storage Tanks	10,000 gallons each	-	-	-	-
HS2	-	Superba Heat Set Lines (8)	450 lbs yarn/hr	-	-	-	-
HS3	-	Superba Heat Set Lines with Spectradye(2)	150 lbs yarn/hr	-	-	-	-
WWTP	-	Wastewater Treatment Plant	-	-	-	-	-
-	-	Dye Mixers	-	-	-	-	-
PVC1	-	PVC Oven Gas-Fired Burners (15)	364,000 Btu/hr each	-	-	-	-
PVC1	-	PVC Tile Line Singer	700,000 Btu/hr	-	-	-	-
PW	-	Parts Washer	-	-	-	-	-
SLD	-	Self Lock Dryer	1.5 MMBtu/hr	-	-	-	-

\*The Size/Rated Capacity is provided for informational purposes only and is not an applicable requirement.

### **III. Fuel Burning Equipment Requirements – (B5, B6 and B7)**

#### **A. Limitations**

1. Particulate matter emissions from the operation of the Erie City VC boiler (B7) shall be controlled by the use of two Zurn multicyclones.  
(9 VAC 5-80-110 and 2/13/78 Permit)
2. Particulate matter emissions from the operation of the Erie City VC boiler (B7) shall not exceed 0.28 pounds per million BTU heat input or 43.4 pounds per hour.  
(9 VAC 5-80-110 and Condition 4 of 2/13/78 Permit)
3. Particulate matter emissions from the operation of the Babcock and Wilcox boiler (B5) shall not exceed 24.8 pounds per hour.  
(9 VAC 5-80-110, 9 VAC 5-40-900 and 9 VAC 5-40-910)
4. Particulate matter emissions from the operation of the Babcock and Wilcox boiler (B6) shall not exceed 14.8 pounds per hour.  
(9 VAC 5-80-110, 9 VAC 5-40-900 and 9 VAC 5-40-910)
5. Sulfur dioxide emissions from the operation of the boilers (B5, B6 and B7) combined shall not exceed 916.08 pounds per hour.  
(9 VAC 5-80-110 and 9 VAC 5-40-930)
6. The approved fuel for the Erie City VC boiler (B7) is coal. A change in the fuel may require a permit to modify and operate.  
(9 VAC 5-80-110 and Condition 7 of 2/13/78 Permit)
7. The approved fuels for the Babcock and Wilcox boilers (B5 and B6) are natural gas and residual oil. A change in the fuels may require a permit to modify and operate.  
(9 VAC 5-80-110)
8. The average annual ash content of the coal to be burned in the Erie City VC boiler (B7) shall not exceed seven percent (7%) and the average annual sulfur content of the coal burned in the Erie City VC boiler (B7) shall not exceed one percent (1%).  
(9 VAC 5-80-110 and Condition 5 of 2/13/78 Permit)
9. The maximum sulfur content of the residual oil to be burned in the Babcock and Wilcox boilers (B5 and B6) shall not exceed two and a half percent (2.5%) by weight per shipment.  
(9 VAC 5-80-110)

10. Visible emissions from the Erie City VC boiler stack (B7) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.  
(9 VAC 5-80-110 and 9 VAC 5-50-80)
11. Visible emissions from each of the Babcock and Wilcox boiler stacks (B5 and B6) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed sixty percent (60%) opacity.  
(9 VAC 5-80-110 and 9 VAC 5-40-940)
12. Boiler emissions shall be controlled by proper operation and maintenance. Boiler operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at minimum. The permittee shall have available good written operating procedures and a maintenance schedule for each boiler.  
(9 VAC 5-80-110)

## **B. Periodic Monitoring**

1. The permittee shall perform periodic monitoring of the Babcock and Wilcox boiler stacks (B5 and B6) as follows:
  - a. Conduct weekly inspections of each stack to determine the presence of visible emissions. If during the inspection, visible emissions are observed, an EPA Method 9 (40 CFR Part 60, Appendix A) visible emissions evaluation (VEE) shall be conducted. The VEE shall be conducted for a minimum period of six (6) minutes. If any of the observations exceed the applicable opacity limit, the observation period shall continue until sixty (60) minutes of observations have been completed.
  - b. If the results of any VEE exceed the standard in Condition III.A.11, a performance test shall be conducted for particulate matter (PM) on the boiler stack which exceeded the standard using EPA Method 5 (40 CFR Part 60, Appendix A). The tests shall be performed and demonstrate compliance with the standard contained in Condition III.A.3 or III.A.4 within 90 days of the exceedance of the opacity standard or within one calendar year of the previous stack test of that boiler stack whichever occurs later. The details of the test are to be arranged with the Director, Valley Region. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Director, Valley Region, within 45 days after test completion and shall conform to the test report format enclosed with this permit.

(9 VAC 5-80-110)

2. When a performance test is required by Condition III.B.1.b, the permittee shall conduct a concurrent VEE, in accordance with 40 CFR Part 60, Appendix A, Method 9, on the stack being tested. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Director, Valley Region. The permittee shall submit a test protocol at least 30 days prior to testing. Should conditions prevent concurrent opacity observations, the Director, Valley Region, shall be notified in writing, within seven days, and visible emissions testing is to be rescheduled within 30 days. Rescheduled testing is to be conducted under the same conditions (as possible) as the performance tests. Two copies of the test results shall be submitted to the Director, Valley Region, within 45 days after test completion and shall conform to the test report format enclosed with this permit.  
(9 VAC 5-80-110)
3. The permittee shall perform a weekly inspection of the Erie City VC boiler stack (B7). The inspection shall include an observation of the presence of visible emissions. If during the inspection visible emissions are observed, a visible emissions evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9. The VEE shall be conducted for a minimum of six (6) minutes. If any of the observations exceed twenty percent (20%), the VEE shall be conducted for a total of sixty (60) minutes. All observations, VEE results and corrective actions taken shall be recorded.  
(9 VAC 5-80-110)
4. The permittee shall obtain a certification from the fuel supplier with each shipment of residual oil. Each fuel supplier certification shall include the following:
  - a. The name of the fuel supplier;
  - b. The date on which the residual oil was received;
  - c. The volume of residual oil delivered in the shipment;
  - d. A statement that the oil complies with the American Society for Testing and Materials specifications for residual oil; and
  - e. The sulfur content (in percent) of the residual oil.  
(9 VAC 5-50-410 and 9 VAC 5-80-110)
5. The permittee shall obtain a certification from the fuel supplier with each shipment of coal. Each fuel supplier certification shall include the following:
  - a. The name of the fuel supplier;
  - b. The date on which the coal was received;

- c. The weight of the coal delivered in the shipment;
- d. The method used to determine the sulfur content of the coal;
- e. The higher heating value of the coal;
- f. The ash content (in percent) of the coal; and
- g. The sulfur content (in percent) of the coal.

(9 VAC 5-50-410 and 9 VAC 5-80-110)

#### **C. Compliance Assurance Monitoring (CAM)**

1. The permittee shall conduct monitoring as specified in the Multicyclone Compliance Assurance Monitoring (CAM) Plan (Attachment A) for the mutlicyclone unit consisting of two Zurn multicyclones (B7).  
(9 VAC 5-80-110 and 40 CFR 64.6(c))
2. The permittee shall develop a Quality Improvement Plan (QIP) for the multicyclone unit (B7) if more than six excursions from the pressure drop indicator range (Indicator 2) specified in the Multicyclone Compliance Assurance Monitoring (CAM) Plan (Attachment A) occur within a six-month reporting period, according to 40 CFR 64.8.  
(9 VAC 5-80-110 and 40 CFR 64.8)

#### **D. Recordkeeping**

1. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
  - a. The monthly and annual throughput of natural gas (in million cubic feet) and residual oil (in 1000 gallons) for each Babcock and Wilcox boiler (B5 and B6). The annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
  - b. The monthly and annual throughput of coal (in tons) for the Erie City VC boiler (B7). The annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
  - c. All fuel supplier certifications.

- d. A log of weekly inspections and the results of all VEEs and performance tests performed on each Babcock and Wilcox boiler stack (B5 and B6) as required in Condition III.B.1.
- e. The results of all VEEs performed on each Babcock and Wilcox boiler stack (B5 and B6) as required in Condition III.B.2.
- f. A log of weekly inspections and the results of all VEEs performed on the Erie City VC boiler stack (B7) as required in Condition III.B.3.
- g. The results of the concurrent VEE performed on the Erie City VC boiler stack (B7) as required in Condition III.E.1.
- h. The DEQ-approved, pollutant-specific emission factors and the equations used to demonstrate compliance with Conditions III.A.2, III.A.3, III.A.4 and III.A.5.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110)

- 2. The permittee shall maintain records of the required training for the boiler operators including a statement of time, place and nature of training provided. The permittee shall have available good written operating procedures and a maintenance schedule for the boilers. These procedures shall be based on the manufacturer's recommendations, at minimum. All records required by this condition shall be kept on site and made available for inspection by the DEQ.  
(9 VAC 5-80-110)
- 3. The permittee shall maintain documentation of monitoring required by the Multicyclone CAM Plan (Attachment A), to include but not limited to:
  - a. EPA Method 5 stack test results.
  - b. Pressure drop records.
  - c. Monthly and annual inspection logs including date, time, and name of person performing each inspection, results of each inspection, and any maintenance or repairs performed as a result of these inspections.
  - d. Records of all excursions, including date, time and corrective actions taken.

(9 VAC 5-80-110, 40 CFR 64.9 and 9 VAC 5-50-50)

**E. Testing**

1. The permittee shall conduct a concurrent visible emissions evaluation (VEE) in accordance with 40 CFR Part 60, Appendix A, EPA Method 9, with the each performance test required by the Multicyclone CAM Plan. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six-minute average. The details of the test are to be arranged with the Director, Valley Region. The permittee shall submit a test protocol at least 30 days prior to testing. Should conditions prevent concurrent opacity observations, the Director, Valley Region, shall be notified in writing, within seven days, and visible emissions testing is to be rescheduled within 30 days. Rescheduled testing is to be conducted under the same conditions (as possible) as the performance test. Two copies of the test results shall be submitted to the Director, Valley Region, within 45 days after test completion and shall conform to the test report format enclosed with this permit.  
(9 VAC 5-80-110)
2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
SO <sub>2</sub>	EPA Methods 6, 19
PM/PM-10	EPA Methods 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

**F. Reporting**

A written report containing the following information pertaining to the Multicyclone CAM Plan shall be submitted to the Director, Valley Region, no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions and the corrective actions taken; and
- b. A description of actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the plan has been completed and reduced the likelihood of similar levels of excursions.

The information listed above may be included in the reports required by Condition XI.C.3.

(9 VAC 5-80-110 and 40 CFR 64.9(a)(2))

#### **IV. Process Equipment Requirements – Coal Handling (CH1 – CH5)**

##### **A. Limitations**

1. Particulate emissions from the railcar shaker (CH1), coal bucket elevator (CH2), storage pile transfer (CH3) and coal storage silo stack (CH5) shall not exceed the process weight limit as determined by the following equation:

$$E = 55.0P^{0.11}-40$$

Where:

E = emission rate in lbs/hr

P = process weight rate in tons/hr

(9 VAC 5-40-260 and 9 VAC 5-80-110)

2. Particulate emissions from the coal storage silo (CH5) shall be controlled by wet suppression. The wet suppression system shall be provided with adequate access for inspection.  
(9 VAC 5-80-110)
3. Fugitive dust emission controls for the railcar shaker (CH1), coal bucket elevator (CH2), storage pile transfer (CH3) and coal storage pile (CH4) shall include the following, or equivalent, as a minimum:
  - a. Dust from material handling, conveying, load-outs and traffic areas shall be controlled by wet suppression or equivalent (as approved by the DEQ).
  - b. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.
  - c. Dust from haul roads and traffic areas shall be controlled by application of asphalt, water, suitable chemicals or equivalent methods approved by the DEQ.
  - d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt, product or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

(9 VAC 5-50-90 and 9 VAC 5-80-110)

4. Visible fugitive emissions from the railcar shaker (CH1), coal bucket elevator (CH2), storage pile transfer (CH3) and coal storage pile (CH4) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.  
(9 VAC 5-50-80 and 9 VAC 5-80-110)
5. Visible emissions from the coal storage silo stack (CH5) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.  
(9 VAC 5-50-80 and 9 VAC 5-80-110)

## **B. Monitoring and Recordkeeping**

1. The permittee shall perform a weekly inspection of the coal storage silo stack (CH5). The inspection shall include an observation of the presence of visible emissions. If during the inspection visible emissions are observed, a visible emissions evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9, unless timely corrective action is taken such that the stack resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six (6) minutes. If any of the observations exceed twenty percent (20%), the VEE shall be conducted for a total of sixty (60) minutes. All observations, VEE results and corrective actions taken shall be recorded.  
(9 VAC 5-80-110)
2. The permittee shall perform and maintain records of the following daily inspection and maintenance activities on the railcar shaker (CH1), coal bucket elevator (CH2), storage pile transfer (CH3) and coal storage pile (CH4):
  - a. The permittee shall inspect and maintain daily the water spray systems used to control fugitive emissions from coal handling activities;
  - b. The permittee shall perform a daily visual survey of the coal handling activities for any sources of excessive fugitive emissions. For the purpose of this survey, excessive emissions are considered to be any visible emissions that leave the plant site boundaries. The person conducting this survey does not have to be Method 9 certified. However, the individual should be familiar with the procedures of Method 9 including using the proper location to observe visible emissions. If sources of excess fugitive emissions are identified during the survey, the permittee shall use water or a suitable chemical treatment to minimize the fugitive emissions. If water is used to control the fugitive dust emissions, the permittee shall take care not to create a water quality problem from surface water run-off.  
(9 VAC 5-80-110)

3. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
- a. The pollutant-specific emission factors and equations used to demonstrate compliance with Condition IV.A.1.
  - b. Inspection records as required by Conditions IV.B.1 and IV.B.2.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.  
(9 VAC 5-80-110)

### C. Testing

If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM-10	EPA Methods 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

## **V. Process Equipment Requirements – Yarn Dye Lines (YD1 – YD5)**

### **A. Limitations**

1. Volatile organic compound emissions (VOC) from the #1 Ilma line (YD1) are limited to 0.0005 pounds VOC per pound of yarn dye as applied, calculated as a monthly weighted average.  
(9 VAC 5-80-110 and Condition 3 of 12/10/99 Permit, as amended 6/29/06)
2. VOC emissions from the #1 Ilma line (YD1) lubricant are limited to 0.003 pounds VOC per pound of yarn lubricant as applied, calculated as a monthly weighted average.  
(9 VAC 5-80-110 and Condition 4 of 12/10/99 Permit, as amended 6/29/06)
3. VOC emissions from the #2 Ilma line (YD2) shall be controlled by limiting the amount of volatile organic compounds within the dyeing solution to 0.0784 percent by weight. The permittee shall supply samples of the dyeing solution at any time upon request by the Department. The #2 Ilma line (YD2) shall be provided with adequate access for inspection.  
(9 VAC 5-80-110 and Part I - Condition 4 of 12/12/90 Permit)
4. The #1 Ilma line (YD1) shall not operate more than 7500 hours per year, calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-80-110 and Condition 6 of 12/10/99 Permit, as amended 6/29/06)
5. The throughput of carpet yarn dye for the #1 Ilma line (YD1) shall not exceed 3,416,400 pounds per month.  
(9 VAC 5-80-110 and Condition 7 of 12/10/99 Permit, as amended 6/29/06)
6. The throughput of carpet yarn lubricant for the #1 Ilma line (YD1) shall not exceed 284,700 pounds per month.  
(9 VAC 5-80-110 and Condition 9 of 12/10/99 Permit, as amended 6/29/06)
7. The throughput of carpet yarn dye for the #1 Ilma line (YD1) shall not exceed 35,100,000 pounds per year, calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-80-110 and Condition 8 of 12/10/99 Permit, as amended 6/29/06)
8. The throughput of carpet yarn lubricant for the #1 Ilma line (YD1) shall not exceed 2,925,000 pounds per year, calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-80-110 and Condition 10 of 12/10/99 Permit, as amended 6/29/06)

9. The annual consumption of dyeing solution for the #2 Ilma line (YD2) shall not exceed 16,170 tons, calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-80-110 and Part I - Condition 5 of 12/12/90 Permit)
10. The average throughput of steam to the #1 Ilma line (YD1) shall not exceed 10,968 pounds per hour, calculated on a weekly basis.  
(9 VAC 5-80-110 and Condition 11 of 12/10/99 Permit, as amended 6/29/06)
11. Visible emissions from each #1 Ilma line exhaust stack (YD1-1&2, and YD1-3) shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A).  
(9 VAC 5-50-80, 9 VAC 5-80-110 and Condition 13 of 12/10/99 Permit, as amended 6/29/06)
12. Visible emissions from each #2 Ilma line exhaust stack (YD2-S2, YD2-D1, and YD2-D2) shall not exceed five percent (5%) opacity.  
(9 VAC 5-50-80, 9 VAC 5-80-110 and Part I - Condition 7 of 12/12/90)
13. Visible emissions from the Ilma sample line exhaust stack (YD3) and the Lanly dryer exhaust stack (YD4) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.  
(9 VAC 5-50-80 and 9 VAC 5-80-110)
14. Visible fugitive emissions from the pack kettles (YD5) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed sixty percent (60%) opacity.  
(9 VAC 5-40-80 and 9 VAC 5-80-110)
15. Emissions from the operation of the #1 Ilma line (YD1) shall not exceed the limits specified below:

Volatile Organic Compounds	3.5 lbs/hr	13.2 tons/yr
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Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110 and Condition 12 of 12/10/99 Permit, as amended 6/29/06)

16. Emissions from the operation of the #2 Ilma line (YD2) shall not exceed the limits specified below:

Volatile Organic Compounds	2.9 lbs/hr	12.7 tons/yr
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Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110 and Part I - Condition 6 of 12/12/90 Permit)

17. Emissions from the operation of the Lanly dryer (YD4) shall not exceed the limits specified below:

Volatile Organic Compounds	3.2 lbs/hr	1.8 tons/yr
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Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110 and Part I - Condition 4 of 7/10/86 Permit, as amended 6/29/06)

18. The permittee shall develop, maintain and have available to all operators good written operating procedures for the operation of the #2 Ilma line (YD2).

(9 VAC 5-80-110 and Part II - Condition 4 of 12/12/90 Permit)

## B. Monitoring

1. The permittee shall determine compliance with the VOC limits in Conditions V.A.1 and V.A.2 by calculating the monthly weighted average of the mass of VOC used per mass of yarn dye or lubricant as applied in the #1 Ilma line (YD1) using the following equation:

$$VOC = \frac{\sum_{i=1}^n W_i M_i}{\sum_{i=1}^n M_i}$$

Where:

VOC = the weighted average mass, in pounds, of VOC per mass, in pounds, of yarn dye or lubricant applied each calendar month

$W_i$  = the weight fraction of VOC of each yarn dye or lubricant (i) applied during the calendar month

$M_i$  = the total mass, in pounds, of each yarn dye or lubricant (i) applied during the calendar month

(9 VAC 5-80-110)

2. The VOC content of each yarn dye and lubricant shall be determined using the following procedures:
- The VOC content of each dye or lubricant as supplied shall be determined by the permittee or the supplier initially or when the dye or lubricant is modified or substituted using Reference Method 24 or 24A (40 CFR Part 60, Appendix A). Such content shall be used for purposes of calculating emissions, the monthly weighted average mass of VOC per mass of yarn dye as applied and the monthly weighted average mass of VOC per mass of yarn lubricant as applied.
  - Each dye and lubricant as supplied whose MSDS indicates a VOC content of 100% by weight may be assumed to be 100% VOC for the purpose of calculating emissions, the monthly weighted average mass of VOC per mass of yarn dye as applied and the monthly weighted average mass of VOC per mass of yarn lubricant as applied in lieu of Reference Method 24 or 24A (40 CFR Part 60, Appendix A) testing.
  - Each new dye and lubricant as supplied received after the effective date of this permit or when the dye or lubricant is modified or substituted shall be tested by the permittee or the supplier within 90 days of the receipt of shipment, modification or substitution. Each dye and lubricant as supplied shipment received shall be clearly identified by a product formulation number that may be correlated to Method 24 or 24A test results.
  - Until such time as testing is conducted for the purpose of calculating the monthly weighted average mass of VOC per mass of yarn dye or lubricant as applied in the #1 Ilma line (YD1) or when Reference Method 24 or 24A VOC content data is not available, the VOC content of each dye or lubricant as supplied shall be based on formulation data as shown on the Material Safety Data Sheet (MSDS) or other vendor information. If the VOC content is given as a range, the maximum value shall be used.
- (9 VAC 5-80-110)
3. The permittee shall determine compliance with the VOC limit in Condition V.A.3 by calculating the monthly VOC percent by weight within the dyeing solution for the #2 Ilma line (YD2) using the following equation:

$$VOC_{wt} = \frac{\sum_{i=1}^n W_i M_i}{\sum_{i=1}^n M_i} \times 100\%$$

Where:

$VOC_{wt}$  = the VOC percent by weight within the dyeing solution applied each calendar month

$W_i$  = the weight fraction of VOC of each dyeing solution (i) applied during the calendar month

$M_i$  = the total mass, in pounds, of each dyeing solution (i) applied during the calendar month

(9 VAC 5-80-110)

4. The VOC content of each dye within the dyeing solution shall be determined using the following procedures:
  - a. The VOC content of each dye as supplied shall be determined by the permittee or the supplier initially or when the dye is modified or substituted using Reference Method 24 or 24A (40 CFR Part 60, Appendix A). Such content shall be used for purposes of calculating emissions and the monthly VOC percent by weight within the dyeing solution applied.
  - b. Each dye as supplied whose MSDS indicates a VOC content of 100% by weight may be assumed to be 100% VOC for the purpose of calculating emissions and the monthly VOC percent by weight within the dyeing solution applied in lieu of Reference Method 24 or 24A (40 CFR Part 60, Appendix A) testing.
  - c. Each new dye as supplied received after the effective date of this permit or when the dye is modified or substituted shall be tested by the permittee or the supplier within 90 days of the receipt of shipment, modification or substitution. Each dye as supplied shipment received shall be clearly identified by a product formulation number that may be correlated to Method 24 or 24A test results.
  - d. Until such time as testing is conducted for the purpose of calculating the VOC percent by weight within the dyeing solution applied in the #2 Ilma line (YD2) or when Reference Method 24 or 24A VOC content data is not available, the VOC content of each dye as supplied shall be based on formulation data as shown on the Material Safety Data Sheet (MSDS) or other vendor information. If the VOC content is given as a range, the maximum value shall be used.

(9 VAC 5-80-110)

5. Each process steam line for the #1 Ilma line (YD1) shall be equipped with a steam flow meter and a 7-day circular chart recorder. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written

requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the #1 Ilma line (YD1) is operating.

(9 VAC 5-80-110 and Condition 5 of 12/10/99 Permit, as amended 6/29/06)

6. The permittee shall determine compliance with the steam throughput limit in Condition V.A.10 by calculating weekly the average hourly steam throughput using the following equation:

$$STM_{avg} = \frac{\sum_{i=1}^7 M_i}{\sum_{i=1}^7 H_i}$$

Where:

$STM_{avg}$  = the average hourly steam throughput in pounds per hour

$M_i$  = the total mass, in pounds, of steam throughput during a 7-day period

$H_i$  = the total number of hours of operation during the corresponding 7-day period

(9 VAC 5-80-110)

7. The permittee shall conduct visible emissions inspections on each #1 Ilma line exhaust stack (YD1-1&2, and YD1-3) and #2 Ilma line exhaust stack (YD2-S2, YD2-D1, and YD2-D2) in accordance with the following procedures and frequencies:
- At a minimum of once per week, the permittee shall determine the presence of visible emissions. If during the inspection visible emissions are observed, a visible emissions evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9. The VEE shall be conducted for a minimum of six (6) minutes. If any of the observations exceed five percent (5%), the VEE shall be conducted for a total of sixty (60) minutes. If the 60-minute VEE indicates a violation of the standard, corrective action shall be taken.
  - All visible emissions inspections shall be performed when the equipment is operating.
  - If visible emissions inspections conducted during twelve (12) consecutive weeks show no visible emissions for a particular stack, the permittee may reduce the monitoring frequency to once per month for that stack. Anytime the monthly

visible emissions inspections show visible emissions, or when requested by DEQ, the monitoring frequency shall be increased to once per week for that stack.

All observations, VEE results, and corrective actions taken shall be recorded.

(9 VAC 5-80-110)

8. The permittee shall conduct visible emissions inspections on the Ilma Sample line exhaust stack (YD3) and the Lanly dryer exhaust stack (YD4) in accordance with the following procedures and frequencies:
  - a. At a minimum of once per week, the permittee shall determine the presence of visible emissions. If during the inspection visible emissions are observed, a visible emissions evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9. The VEE shall be conducted for a minimum of six (6) minutes. If any of the observations exceed twenty percent (20%), the VEE shall be conducted for a total of sixty (60) minutes. If the 60-minute VEE indicates a violation of the standard, corrective action shall be taken.
  - b. All visible emissions inspections shall be performed when the equipment is operating.
  - c. If visible emissions inspections conducted during twelve (12) consecutive weeks show no visible emissions for a particular stack, the permittee may reduce the monitoring frequency to once per month for that stack. Anytime the monthly visible emissions inspections show visible emissions, or when requested by DEQ, the monitoring frequency shall be increased to once per week for that stack.

All observations, VEE results, and corrective actions taken shall be recorded.

(9 VAC 5-80-110)

9. The permittee shall determine compliance with the hourly VOC emission limit in Condition V.A.15 by calculating the average hourly emissions from the #1 Ilma line (YD1) using the following equation:

$$E_{voc} = \frac{\left( \sum_{i=1}^n W_{dye,i} M_{dye,i} + \sum_{i=1}^n W_{lub,i} M_{lub,i} \right)}{H}$$

Where:

$E_{voc}$  = the average hourly VOC emissions in pounds per hour

$W_{dye,i}$  = the weight fraction of VOC of each yarn dye (i) applied during the calendar month

$M_{dye,i}$  = the total mass, in pounds, of each yarn dye (i) applied during the calendar month

$W_{lub,i}$  = the weight fraction of VOC of each yarn lubricant (i) applied during the calendar month

$M_{lub,i}$  = the total mass, in pounds, of each yarn lubricant (i) applied during the calendar month

H = the total number of hours of operation during the calendar month

(9 VAC 5-80-110)

10. The permittee shall determine compliance with the annual VOC emission limit in Condition V.A.15 by calculating the monthly emissions from the #1 Ilma line (YD1) using the following equation:

$$E_{voc} = \frac{\left( \sum_{i=1}^n W_{dye,i} M_{dye,i} + \sum_{i=1}^n W_{lub,i} M_{lub,i} \right)}{2000}$$

Where:

$E_{voc}$  = the total monthly VOC emissions in tons

$W_{dye,i}$  = the weight fraction of VOC of each yarn dye (i) applied during the calendar month

$M_{dye,i}$  = the total mass, in pounds, of each yarn dye (i) applied during the calendar month

$W_{lub,i}$  = the weight fraction of VOC of each yarn lubricant (i) applied during the calendar month

$M_{lub,i}$  = the total mass, in pounds, of each yarn lubricant (i) applied during the calendar month

Annual VOC emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110)

11. The permittee shall determine compliance with the hourly VOC emission limit in Condition V.A.16 by calculating the average hourly emissions from the #2 Ilma line (YD2) using the following equation:

$$E_{voc} = \frac{\sum_{i=1}^n W_i M_i}{H}$$

Where:

$E_{voc}$  = the average hourly VOC emissions in pounds per hour

$W_i$  = the weight fraction of VOC of each dyeing solution (i) applied during the calendar month

$M_i$  = the total mass, in pounds, of each dyeing solution (i) applied during the calendar month

$H$  = the total number of hours of operation during the calendar month

(9 VAC 5-80-110)

12. The permittee shall determine compliance with the annual VOC emission limit in Condition V.A.16 by calculating the monthly emissions from the #2 Ilma line (YD2) using the following equation:

$$E_{voc} = \frac{\sum_{i=1}^n W_i M_i}{2000}$$

Where:

$E_{voc}$  = the total monthly VOC emissions in tons

$W_i$  = the weight fraction of VOC of each dyeing solution (i) applied during the calendar month

$M_i$  = the total mass, in pounds, of each dyeing solution (i) applied during the calendar month

Annual VOC emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110)

13. The permittee shall determine compliance with the hourly VOC emission limit in Condition V.A.17 by calculating the average hourly emissions from the Lanly dryer (YD4) using the following equation:

$$E_{voc} = \frac{\sum_{i=1}^n W_i M_i}{H}$$

Where:

$E_{voc}$  = the average hourly VOC emissions in pounds per hour

$W_i$  = the weight fraction of VOC of each dye (i) applied to the yarn sock dried in the Lanly dryer during the calendar month

$M_i$  = the total mass, in pounds, of each dye (i) applied to the yarn sock dried in the Lanly dryer during the calendar month

$H$  = the total number of hours of operation during the calendar month

(9 VAC 5-80-110)

14. The permittee shall determine compliance with the annual VOC emission limit in Condition V.A.17 by calculating the monthly emissions from the Lanly dryer (YD4) using the following equation:

$$E_{voc} = \frac{\sum_{i=1}^n W_i M_i}{2000}$$

Where:

$E_{voc}$  = the total monthly VOC emissions in tons

$W_i$  = the weight fraction of VOC of each dye (i) applied to the yarn sock dried in the Lanly dryer (YD4) during the calendar month

$M_i$  = the total mass, in pounds, of each dye (i) applied to the yarn sock dried in the Lanly dryer (YD4) during the calendar month

Annual VOC emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110)

### C. Recordkeeping

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such

records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:

1. Weekly and monthly hours of operation of the #1 Ilma line (YD1).
2. Monthly hours of operation of the #2 Ilma line (YD2) and the Lanly dryer (YD4).
3. Annual hours of operation of the #1 Ilma line (YD1), calculated monthly as the sum of each consecutive 12-month period.
4. Monthly and annual throughput of carpet yarn dye (in pounds) used in the #1 Ilma line (YD1). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
5. Monthly and annual throughput of carpet yarn lubricant (in pounds) used in the #1 Ilma line (YD1). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
6. The daily, weekly and monthly throughput of dyeing solution used in the #2 Ilma line (YD2).
7. The daily, weekly and monthly throughput of material dyed in the #2 Ilma line (YD2).
8. Monthly and annual throughput of dye (in pounds) for the Lanly dryer (YD4). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
9. Hourly throughput of process steam (in pounds) used by the #1 Ilma line (YD1), calculated as a weekly average.
10. Hourly and annual VOC emissions (in pounds and tons, respectively) from the #1 Ilma line (YD1). Hourly emissions shall be calculated as a monthly average. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
11. Hourly and annual VOC emissions (in pounds and tons, respectively) from the #2 Ilma line (YD2). Hourly emissions shall be calculated as a monthly average. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
12. Hourly and annual VOC emissions (in pounds and tons, respectively) from the Lanly dryer (YD4). Hourly emissions shall be calculated as a monthly average. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

13. VOC content of each carpet yarn dye and lubricant (in pounds per pound of yarn dye or lubricant) used in the #1 Ilma line (YD1), calculated as a monthly weighted average.
14. An analysis of the dyeing solution having the highest concentration of volatile organic compounds by weight to be used in the #2 Ilma line (YD2) for each month. This analysis shall include the concentration by weight of each VOC within the dyeing solution.
15. Material Safety Data Sheets (MSDS) and product formulation data including total and individual mass VOC content, in %, as applicable, for each dyeing solution used in the #2 Ilma line (YD2).
16. MSDS or other vendor information showing VOC content, HAP content, water content and solids content for each carpet yarn dye component and carpet yarn lubricant component used in the #1 Ilma line (YD1).
17. MSDS or other vendor information showing VOC content, HAP content, water content and solids content for each dye component used in the Ilma sample line (YD3) and pack kettles (YD5).
18. Operation and control device monitoring records for the #1 Ilma line (YD1) process steam flow meter(s) and 7-day circular chart recorder(s).
19. Results of all stack tests, visible emissions evaluations and performance evaluations for the #1 Ilma line (YD1).
20. Service and maintenance records for the #2 Ilma line (YD2).
21. Records of any reference method testing that is performed under Conditions V.B.2 and V.B.4.
22. Inspection records as required by Conditions V.B.7 and V.B.8.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110, Condition 15 of 12/10/99 Permit, as amended 6/29/06, and Part II - Condition 3 of 12/12/90 Permit)

#### **D. Testing**

1. The #1 Ilma line (YD1), #2 Ilma line (YD2) and the Lanly dryer (YD4), shall be constructed so as to allow for emissions testing upon reasonable notice at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.  
(9 VAC 5-80-110, Condition 16 of 12/10/99 Permit, as amended 6/29/06, Part II - Condition 2 of 12/12/90 Permit and Part II - Condition 3 of 7/10/86 Permit, as amended 6/29/06)
2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
VOC Content	EPA Methods 24, 24a
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

#### **E. Reporting**

The permittee shall notify the Director, Valley Region, prior to changing the dye formulation which may increase or change the VOC content of the dye used in the #2 Ilma line (YD2).  
(9 VAC 5-80-110 and Part I - Condition 9 of 12/12/90 Permit)

## **VI. Process Equipment Requirements – Carpet Backing Lines (LCS, VAES, PVC1, PVCS, HM1, HMM, RHMM and HMS)**

### **A. Limitations**

1. Particulate emissions from the latex calcium carbonate filler silo (LCS), calcium carbonate storage silo (PVCS), hot melt mix tanks (HMM) and remote hot melt mix tank (RHMM) shall not exceed the process weight limit as determined by the following equation:

$$E = 4.10P^{0.67}$$

Where:

E = emission rate in lbs/hr

P = process weight rate in tons/hr

(9 VAC 5-40-260 and 9 VAC 5-80-110)

2. Particulate emissions from the VAE latex filler silo (VAES) shall not exceed the process weight limit as determined by the following equation:

$$E = 55.0P^{0.11}-40$$

Where:

E = emission rate in lbs/hr

P = process weight rate in tons/hr

(9 VAC 5-40-260 and 9 VAC 5-80-110)

3. Particulate emissions from the latex calcium carbonate filler silo (LCS) and return air from the transfer of filler from the latex calcium carbonate filler silo to the SBR latex mixer shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.  
(9 VAC 5-80-110)

4. Particulate emissions from the hot melt mix tanks filler line cyclone exhaust (HMM) and remote hot melt mix tank filler line cyclone exhaust (RHMM) shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.  
(9 VAC 5-80-110)

5. Particulate matter emissions from the calcium carbonate storage silo (PVCS) shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection and shall be in operation when the calcium carbonate storage silo (PVCS) is operating.  
(9 VAC 5-80-110 and Condition 4 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)
6. Particulate emissions from the filling of the VAE latex filler silo (VAES) and return air from the transfer of filler from the VAE latex filler silo to the VAE latex mixer shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.  
(9 VAC 5-80-110 and Condition 3 of 12/5/97 Permit)
7. Particulate matter emissions from the PVC carpet backing line (PVC1) shall be controlled by a coalescing filter. The coalescing filter shall be provided with adequate access for inspection and shall be in operation when the PVC carpet backing line (PVC1) is operating.  
(9 VAC 5-80-110 and Condition 3 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)
8. The VAE latex filler silo (VAES) operation shall process no more than 130,000 pounds per day, calculated daily as the sum of each consecutive 24-hour period.  
(9 VAC 5-80-110 and Condition 5 of 12/5/97 Permit)
9. The annual throughput of calcium carbonate for the VAE latex filler silo (VAES) shall not exceed 4,420 tons, calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-80-110 and Condition 6 of 12/5/97 Permit)
10. The calcium carbonate storage silo (PVCS) shall process no more than 120.0 tons per day, calculated daily.  
(9 VAC 5-80-110 and Condition 7 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)
11. The calcium carbonate storage silo (PVCS) shall process no more than 42,000.0 tons per year, calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-80-110 and Condition 8 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)
12. The throughput of plastisol formula to the PVC carpet backing line (PVC1) shall not exceed 283.5 tons per day, calculated daily.  
(9 VAC 5-80-110 and Condition 9 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)

13. The throughput of plastisol formula to the PVC carpet backing line (PVC1) shall not exceed 51,328.0 tons per year, calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-80-110 and Condition 10 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)
14. The throughput of volatile organic compounds (VOC) in the materials used in the hot melt sample line (HMS) shall not exceed 8.6 tons per year, calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-80-110 and Condition 3 of 8/12/02 Permit, as amended 6/29/06)
15. Visible emissions from the latex calcium carbonate filler silo stack (LCS) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed sixty percent (60%) opacity.  
(9 VAC 5-40-80 and 9 VAC 5-80-110)
16. Visible emissions from the hot melt line stacks (HM1-PC and HM1-MC), hot melt sample line stack (HMS), hot melt mix tanks vent (HMM-vent), remote hot melt mix tank vent (RHMM-vent), hot melt mix tanks filler line cyclone exhaust stack (HMM) and remote hot melt mix tank filler line cyclone exhaust stack (RHMM) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.  
(9 VAC 5-50-80 and 9 VAC 5-80-110)
17. Visible emissions from the VAE latex filler silo fabric filter (VAES) exhaust shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.  
(9 VAC 5-80-110, 9 VAC 5-50-80 and Condition 7 of 12/5/97 Permit)
18. Visible emissions from the PVC carpet backing line (PVC1) shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.  
(9 VAC 5-80-110, 9 VAC 5-50-80 and Condition 12 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)
19. Visible emissions from the calcium carbonate storage silo (PVCS) shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.  
(9 VAC 5-80-110, 9 VAC 5-50-80 and Condition 13 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)

20. Emissions from the operation of the PVC carpet backing line (PVC1) shall not exceed the limits specified below:

Particulate Matter	0.65 lbs/hr	1.50 tons/yr
PM-10	0.65 lbs/hr	1.50 tons/yr
Volatile Organic Compounds		5.81 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110 and Condition 11 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)

21. Emissions from the operation of the hot melt sample line (HMS) shall not exceed the limit specified below:

Volatile Organic Compounds	8.6 tons/yr
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Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110 and Condition 4 of 8/12/02 Permit, as amended 6/29/06)

22. The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of training provided including the names of trainees, the date of the training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be available to DEQ personnel upon request.

(9 VAC 5-80-110, Condition 21 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07, and Conditions 13 and 14 of 12/5/97 Permit)

**B. Monitoring**

1. The latex calcium carbonate filler silo fabric filter (LCS), hot melt mix tanks filler line cyclone exhaust fabric filter (HMM) and remote hot melt mix tank filler line cyclone exhaust fabric filter (RHMM) shall each be equipped with a device to continuously measure the differential pressure drop across the fabric filter. Each device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times.  
(9 VAC 5-80-110)
2. The VAE latex filler silo fabric filter (VAES) shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times.  
(9 VAC 5-80-110 and Condition 3 of 12/5/97 Permit)
3. The coalescing filter (PVC1) shall be equipped with a device to continuously measure the differential pressure drop across the coalescing filter. The monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the coalescing filter is operating.  
(9 VAC 5-80-110 and Condition 5 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)
4. The calcium carbonate storage silo fabric filter (PVCS) shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the fabric filter is operating.  
(9 VAC 5-80-110 and Condition 6 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)
5. The permittee shall conduct a visible emissions inspection on the latex calcium carbonate filler silo stack (LCS), the hot melt mix tanks filler line cyclone exhaust stack (HMM) and the remote hot melt mix tank filler line cyclone exhaust stack (RHMM) in accordance with the following procedures and frequencies:
  - a. At a minimum of once per week, the permittee shall determine the presence of visible emissions. Each inspection shall be performed when the equipment is operating and include an observation of the presence of visible emissions and the pressure drop across each fabric filter (LCS, HMM and RHMM). If during the inspection visible emissions are observed, a visible emissions evaluation (VEE)

shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9, unless timely corrective action is taken such that the stack resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six (6) minutes. If any of the observations exceed twenty percent (20%), the VEE shall be conducted for a total of sixty (60) minutes.

- b. If visible emissions inspections conducted during twelve (12) consecutive weeks show no visible emissions for a particular stack, the permittee may reduce the monitoring frequency to once per month for that stack. Anytime the monthly visible emissions inspections show visible emissions, or when requested by DEQ, the monitoring frequency shall be increased to once per week for that stack.

All observations, VEE results and corrective actions taken shall be recorded.  
(9 VAC 5-80-110)

6. The permittee shall conduct a visible emissions inspection on the VAE latex filler silo stack (VAES) and the calcium carbonate storage silo stack (PVCS) in accordance with the following procedures and frequencies:
  - a. At a minimum of once per week, the permittee shall determine the presence of visible emissions. Each inspection shall be performed when the equipment is operating and include an observation of the presence of visible emissions and the pressure drop across each fabric filter (VAES and PVCS). If during the inspection visible emissions are observed, a visible emissions evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9, unless timely corrective action is taken such that the stack resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six (6) minutes. If any of the observations exceed five percent (5%), the VEE shall be conducted for a total of sixty (60) minutes.
  - b. If visible emissions inspections conducted during twelve (12) consecutive weeks show no visible emissions for a particular stack, the permittee may reduce the monitoring frequency to once per month for that stack. Anytime the monthly visible emissions inspections show visible emissions, or when requested by DEQ, the monitoring frequency shall be increased to once per week for that stack.

All observations, VEE results and corrective actions taken shall be recorded.  
(9 VAC 5-80-110)

7. The permittee shall conduct a visible emissions inspection on the PVC carpet backing line stack (PVC1) in accordance with the following procedures and frequencies:
  - a. At a minimum of once per week, the permittee shall determine the presence of visible emissions. Each inspection shall be performed when the equipment is operating and shall include an observation of the presence of visible emissions and the pressure drop across the coalescing filter (PVC1). If during the inspection

visible emissions are observed, a visible emissions evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9, unless timely corrective action is taken such that the stack resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six (6) minutes. If any of the observations exceed five percent (5%), the VEE shall be conducted for a total of sixty (60) minutes.

- b. If visible emissions inspections conducted during twelve (12) consecutive weeks show no visible emissions for a particular stack, the permittee may reduce the monitoring frequency to once per month for that stack. Anytime the monthly visible emissions inspections show visible emissions, or when requested by DEQ, the monitoring frequency shall be increased to once per week for that stack.

All observations, VEE results and corrective actions taken shall be recorded.  
(9 VAC 5-80-110)

8. The permittee shall determine compliance with the hourly particulate matter emission limit in Condition VI.A.20 by calculating daily the average hourly emissions from the PVC carpet backing line (PVC1) using the following equation:

$$E_{PM} = \left( \frac{M \times EF_{plast}}{H} \right) \left( \frac{100 - CE_{cf}}{100} \right)$$

Where:

$E_{PM}$  = the daily average hourly particulate matter emissions in pounds per hour

$M$  = the total throughput of plastisol formula, in pounds, used in the PVC carpet backing line (PVC1) during the calendar day

$H$  = the total number of hours of operation for the PVC carpet backing line (PVC1) during the calendar day

$EF_{plast}$  = the DEQ-approved emission factor in pounds of particulate per pound of plastisol

$CE_{cf}$  = control efficiency of the coalescing filter

(9 VAC 5-80-110)

9. The permittee shall determine compliance with the annual particulate matter emission limit in Condition VI.A.20 by calculating the monthly emissions from the PVC carpet backing line (PVC1) using the following equation:

$$E_{PM} = \left( \frac{M \times EF_{plast}}{2000} \right) \left( \frac{100 - CE_{cf}}{100} \right)$$

Where:

$E_{PM}$  = the monthly particulate matter emissions in tons

$M$  = the total throughput of plastisol formula, in pounds, used in the PVC carpet backing line (PVC1) during the calendar month

$EF_{plast}$  = the DEQ-approved emission factor in pounds of particulate per pound of plastisol

$CE_{cf}$  = control efficiency of the coalescing filter

Annual particulate matter emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110)

10. The permittee shall determine compliance with the annual VOC emission limit in Condition VI.A.21 by calculating the monthly emissions from the hot melt sample line (HMS) using the following equation:

$$E_{voc} = \frac{\sum_{i=1}^n W_i M_i}{2000}$$

Where:

$E_{voc}$  = the total monthly VOC emissions in tons

$W_i$  = the weight fraction of VOC of each material (i) applied during the calendar month

$M_i$  = the total mass, in pounds, of each material (i) applied during the calendar month

Annual VOC emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-110)

### **C. Recordkeeping**

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:

1. Daily and annual throughput of calcium carbonate for the VAE latex filler silo (VAES). Daily throughput shall be calculated daily as the sum of each consecutive 24-hour period. Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
2. Air pollution control equipment training provided and all scheduled and non-scheduled maintenance as required by Condition VI.A.22.
3. Daily hours of operation of the PVC carpet backing line (PVC1).
4. Daily and annual throughput of plastisol formula (in tons) used in the PVC carpet backing line (PVC1). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
5. Daily and annual throughput of latex (in tons) used in the PVC carpet backing line (PVC1). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
6. Monthly and annual throughput of VOC (in tons) in the materials used in the hot melt sample line (HMS). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
7. Hourly particulate matter and PM-10 emissions (in pounds) from the PVC carpet backing line (PVC1), calculated as a daily average.
8. Annual particulate matter, PM-10 and volatile organic compound emissions (in tons) from the PVC carpet backing line (PVC1). Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
9. Monthly and annual VOC emissions (in tons) from the hot melt sample line. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
10. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, HAP content, water content and solids content for each component of the plastisol formula.

11. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, HAP content, water content and solids content for each component of the latex.
12. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, water content and solids content for each material used in the hot melt sample line (HMS).
13. Daily and annual throughput of calcium carbonate (in tons) used in the calcium carbonate storage silo (PVCS). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
14. Inspection records as required by Conditions VI.B.5, VI.B.6 and VI.B.7.
15. The DEQ-approved, pollutant-specific emission factors and the equations used to demonstrate compliance with Conditions VI.A.20 and VI.A.21.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110, Condition 9 of 12/5/97 Permit, Condition 15 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07, and Condition 5 of 8/12/02 Permit, as amended 6/29/06)

#### **D. Testing**

1. The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations when requested.  
(9 VAC 5-80-110, Condition 4 of 12/5/97 Permit and Condition 16 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)
2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
VOC Content	EPA Methods 24, 24a
PM/PM-10	EPA Methods 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

## **E. Reporting**

The permittee shall furnish notification to the Director, Valley Region, of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

1. Identification of the air pollution control equipment to be taken out of service, as well as its location and registration number;
2. The expected length of time that the air pollution control equipment will be out of service;
3. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
4. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-80-110 and Condition 17 of 3/22/02 Permit, as amended 6/29/05, 8/31/06 and 2/12/07)

## **VII. Hazardous Air Pollutant Conditions – Printing, Coating, and Dyeing of Fabrics and Other Textiles**

The following terms and conditions are from 40 CFR Part 63, Subpart OOOO. A current copy of 40 CFR Part 63, Subpart OOOO, has been attached. As used in this section, all terms shall have the meaning as defined in 40 CFR 63.2 and 40 CFR 63.4371.

### *Web Coating and Printing Subcategory*

The affected source for the web coating and printing subcategory is the collection of all of the items listed in the following paragraphs (1) through (5), which includes, but is not limited to, the PVC carpet backing line and its oven and tile line singer (PVC1), the SBR latex mixer (SBRM), the VAE latex mixer (VAEM), the hot melt mix tanks (HMM), the remote hot melt mix tank (RHMM), the diisononyl phthalate storage tanks (DINP1 and DINP2) and the wastewater treatment plant (WWTP), that are used in fabric and other textiles web coating and printing operations. The regulated materials for the web coating and printing subcategory are the coating, printing, thinning and cleaning materials used in the affected source.

- (1) All web coating and printing equipment used to apply cleaning materials to a substrate on the coating or printing line to prepare it for coating or printing material application, to apply coating or printing materials to a substrate and to dry or cure the coating or printing materials, or equipment used to clean web coating/printing operation equipment;
- (2) All containers used for storage and vessels used for mixing coating, printing, thinning, or cleaning materials;
- (3) All equipment and containers used for conveying coating, printing, thinning, or cleaning materials;
- (4) All containers used for storage, and all equipment and containers used for conveying waste materials generated by a coating or printing operation; and
- (5) All equipment, structures, and/or devices(s) used to convey, treat, or dispose of wastewater streams or residuals generated by a coating or printing operation.

### *Dyeing and Finishing Subcategory*

The affected source for the dyeing and finishing subcategory is the collection of all of the items listed in the following paragraphs (1) through (5), which includes, but is not limited to, the #1 Ilma line (YD1), the #2 Ilma line (YD2), the Ilma sample line (YD3), the Lanly dryer (YD4), the pack kettles (YD5), the Superba heat set lines (HS2), the Superba heat set lines with spectradye (HS3), the self lock dryer (SLD), the dye mixers, the parts washers (PW) and the wastewater treatment plant (WWTP), that are used in dyeing and finishing operations. The regulated materials for the dyeing and finishing subcategory are the dyeing and finishing materials used in the affected source.

- (1) All dyeing and finishing equipment used to apply dyeing or finishing materials, to fix dyeing materials to the substrate, to rinse the textile substrate, or to dry or cure the dyeing or finishing materials;
- (2) All containers used for storage and vessels used for mixing dyeing or finishing materials;
- (3) All equipment and containers used for conveying dyeing or finishing materials;
- (4) All containers used for storage, and all equipment and containers used for conveying, waste materials generated by a dyeing or finishing operation; and
- (5) All equipment, structures, and/or devices(s) used to convey, treat, or dispose of wastewater streams or residuals generated by a dyeing or finishing operation.

#### **A. Limitations**

1. Organic hazardous air pollutant (HAP) emissions from the facility shall not exceed the following limits:
  - a. For web coating and printing operations, organic HAP emissions to the atmosphere are limited to 0.12 kilogram (kg) of organic HAP per kg of solids applied.
  - b. For dyeing and finishing operations, organic HAP emissions to the atmosphere are limited to 0.016 kilogram (kg) of organic HAP per kg of dyeing and finishing materials applied.

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110 and 40 CFR 63.4290)
2. The permittee shall meet the following operation and maintenance requirements:
  - a. At all times, including periods of startup, shutdown, and malfunction, the permittee shall operate and maintain the facility, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.
  - b. Malfunctions shall be corrected as soon as practicable after their occurrence.
  - c. Operation and maintenance requirements established pursuant to section 112 of the Clean Air Act are enforceable independent of emissions limitations or other requirements in relevant standards.
  - d. Determination of whether operation and maintenance procedures are being used will be based on information available to the DEQ which may include, but is not limited to, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(9 VAC 5-170-160, 9 VAC 5-80-110, and 40 CFR 63.6(e))

**B. Monitoring**

1. To demonstrate compliance with the organic HAP emission limitation in Condition VII.A.1.a, the permittee shall apply one of the following options to an individual web coating/printing operation or to multiple web coating printing operations in the affected source as a group, or to the entire affected source in the web coating and printing subcategory. The permittee may use either compliance option for different web coating/printing operations or at different times on the same web coating/printing operation. However, the permittee shall not use different compliance options at the same time on the same web coating/printing operation. If the permittee switches between compliance options for any web coating/printing operation or group of operations, the permittee shall document this switch as required by Condition VII.C.1.c and shall report it in the next semiannual compliance report required in Condition VII.D.2.
  - a. *Compliant material option:* Demonstrate that the organic HAP content, as purchased, of each coating and printing material applied in the web coating/printing operation(s) is less than or equal to the emission limit in Condition VII.A.1.a, and that each thinning and cleaning material as purchased contains no organic HAP (as defined in 40 CFR 63.4371). The permittee shall meet all the requirements of Condition VII.B.3 to demonstrate compliance with the emission limit using this option.
  - b. *Emission rate without add-on controls option:* Demonstrate that, based on the regulated materials applied in the web coating/printing operation(s), the organic HAP emission rate for the web coating/printing operation(s) is less than or equal to the emission limit in Condition VII.A.1.a, calculated as a rolling 12-month average emission rate. The permittee shall meet all the requirements in Condition VII.B.4 to demonstrate compliance with the emission limit using this option.

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110 and 40 CFR 63.4291(a)(1) and (2))

2. To demonstrate compliance with the organic HAP emission limitation in Condition VII.A.1.b, the permittee shall apply one of the following options to an individual dyeing/finishing operation or to multiple dyeing/finishing operations in the affected source as a group, or to the entire affected source in the dyeing and finishing subcategory. The permittee may use either compliance option for different dyeing/finishing operations or at different times on the same web dyeing/finishing operation. However, the permittee shall not use different compliance options at the same time on the same dyeing/finishing operation. If the permittee switches between compliance options for any dyeing/finishing operation or group of operations, the permittee shall document this switch as required by Condition VII.C.1.c and shall report it in the next semiannual compliance report required in Condition VII.D.2.

- a. *Compliant material option.* Demonstrate that the mass fraction of organic HAP, as purchased, of each dyeing and finishing material applied in the dyeing/finishing operation(s) is less than or equal to the emission limit in Condition VII.A.1.b. The permittee shall meet all the requirements of Condition VII.B.3 to demonstrate compliance with the emission limit using this option.
- b. *Emission rate without add-on controls option.* Demonstrate that, based on the dyeing and finishing materials applied in the dyeing/finishing operation(s), the combined organic HAP emission rate for dyeing and finishing is less than or equal to the emission limit in Condition VII.A.1.b, calculated as a rolling 12-month average emission rate. The permittee shall meet all the requirements of Condition VII.B.4 to demonstrate compliance with the emission limit using this option.

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110 and 40 CFR 63.4291(c)(1) and (2))

3. Compliance with the compliant material option shall be determined based on the following:
  - a. Any web coating/printing or dyeing/finishing operation(s) shall be in compliance with the applicable emission limit at all times.
  - b. The permittee shall complete the compliance demonstration for the initial compliance period for any web coating/printing operation or dyeing/finishing operation according to the requirements in Condition VII.B.5. The initial compliance period begins on May 29, 2006 and ends on the last day of the first full month after the compliance date.
  - c. The permittee shall demonstrate continuous compliance by the following:
    - (1) For each compliance period, the permittee shall apply no coating or printing material for which the organic HAP content determined using Equation 1 of Condition VII.B.5.c exceeds the emission limit in Condition VII.A.1.a.
    - (2) For each compliance period, the permittee shall apply no dyeing or finishing material for which the mass fraction of organic HAP, determined according to the requirements of Condition VII.B.5.a(4), exceeds the emission limit in Condition VII.A.1.b.
    - (3) For each compliance period, the permittee shall apply only thinning or cleaning materials that contain no organic HAP (as defined in 40 CFR 63.4371) in a coating/printing affected source.

- (4) Each month following the initial compliance period described in Condition VII.B.3.b is a compliance period.
- (5) The application of any regulated material that does not meet the criteria specified in Conditions VII.B.3.c(1) through VII.B.3.c(3) is a deviation from the emission limitations that shall be reported as specified in Condition VII.D.1.f and Condition VII.D.2.e.
- (6) As part of each semiannual compliance report required by Condition VII.D.2, the permittee shall identify any web coating/printing operation or dyeing/finishing operation for which the compliant material option was used. If there were no deviations from the applicable emission limit in Condition VII.A.1, submit a statement that, as appropriate, the web coating/printing operations were in compliance with the emission limitations during the reporting period because no coating or printing material for which the organic HAP content exceeded the emission limit in Condition VII.A.1.a was applied, and only thinning and cleaning materials that contained no organic HAP (as defined in §63.4371) in a web coating/printing affected source were applied; and the dyeing/finishing operations were in compliance with the emission limitations during the reporting period because no dyeing or finishing material for which the mass fraction of organic HAP exceeded the emission limit in Condition VII.A.1.b was applied.
- (7) The permittee shall maintain records as specified in Condition VII.C.1.

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110, 40 CFR 63.4300(a)(1), 40 CFR 63.4320 and 40 CFR 63.4322)

- 4. Compliance with the emission rate without add-on controls option shall be determined based on the following:
  - a. Any web coating/printing or dyeing/finishing operation(s) shall be in compliance with the applicable emission limit for all compliance periods.
  - b. The permittee shall complete the compliance demonstration for the initial compliance period for any web coating/printing operation or dyeing/finishing operation according to the requirements in Condition VII.B.6. The initial compliance period begins on May 29, 2006 and ends on the last day of the 12th full month after the compliance date.
  - c. The permittee shall demonstrate continuous compliance by the following:
    - (1) For each compliance period, the organic HAP emission rate determined according to Condition VII.B.6.a for web coating/printing operations and according to Condition VII.B.6.b for dyeing/finishing operations must be less

than or equal to the applicable emission limit in Condition VII.A.1. Each month following the initial compliance period described in Condition VII.B.4.b is a compliance period consisting of that month and the preceding 11 months. The permittee shall perform the calculations in Condition VII.B.6 on a monthly basis.

- (2) If the organic HAP emission rate for any compliance period exceeded the applicable emission limit in Condition VII.A.1, this is a deviation from the emission limitations for that compliance period and shall be reported as specified in Condition VII.D.1.f and Condition VII.D.2.f.
- (3) As part of each semiannual compliance report required by Condition VII.D.2, the permittee shall identify any web coating/printing operation or dyeing/finishing operation for which the emission rate without add-on controls option was used. If there were no deviations from the applicable emission limit in Condition VII.A.1, the permittee shall submit a statement that, as appropriate, the web coating/printing operations or the dyeing/finishing operations were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in Condition VII.A.1.
- (4) The permittee shall maintain records as specified in Condition VII.C.1.

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110, 40 CFR 63.4300(a)(2), 40 CFR 63.4330 and 40 CFR 63.4332)

- 5. To demonstrate initial compliance with the emission limitations using the compliant material option, the permittee shall meet all the following requirements for any individual web coating/printing or dyeing/finishing operation, for any group of web coating/printing or dyeing/finishing operations in the affected source or for all the web coating/printing or dyeing/finishing operations in the affected source using this option. The permittee shall use the following applicable procedures on each regulated material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. The permittee does not need to redetermine the organic HAP content of regulated materials that are reclaimed onsite and reused in the web coating/printing operation or the dyeing/finishing operation for which the permittee uses the compliant material option, provided these regulated materials in their condition as received were demonstrated to comply with the compliant material option.
  - a. *Determine the mass fraction of organic HAP for each material.* The permittee shall determine the mass fraction of organic HAP for each regulated material applied during the compliance period by using one of the following procedures. The permittee shall only use the option in Condition VII.B.5.a(4) for each printing, dyeing or finishing material applied during the compliance period.

- (1) *Method 311 (appendix A to 40 CFR part 63)*. The permittee may use Method 311 for determining the mass fraction of organic HAP. The following procedures shall be used when performing a Method 311 test.
  - (a) Count each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. Express the mass fraction of each organic HAP counted as a value truncated to no more than four places after the decimal point (*e.g.*, 0.3791).
  - (b) Calculate the total mass fraction of organic HAP in the regulated material being tested by adding up the individual organic HAP mass fractions and truncating the result to no more than three places after the decimal point (*e.g.*, 0.763).
- (2) *Method 24 (appendix A to 40 CFR part 60)*. The permittee may use Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. For a multi-component coating with reactive chemicals, the permittee may use Method 24 on the coating as applied to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for the mass fraction of organic HAP determined from the sum of organic HAP in each component.
- (3) *Alternative method*. The permittee may use an alternative test method for determining the mass fraction of organic HAP, mass fraction of solids, or fraction of organic HAP emitted from a reactive coating once the Administrator (U.S. Environmental Protection Agency) has approved it. The permittee shall follow the procedure in 40 CFR 63.7(f) to submit an alternative test method for approval.
- (4) *Information from the supplier or manufacturer of the material*. The permittee may rely on information other than that generated by the test methods specified in Conditions VII.B.5.a(1) through VII.B.5.a(3), such as manufacturer's formulation data, if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. If there is a disagreement between such information and results of a test conducted according to Conditions VII.B.5.a(1) through VII.B.5.a(3) on the coating, thinning, or cleaning material, then the test method results will take precedence. Information from the supplier or manufacturer of the printing, dyeing, or finishing material is sufficient for determining the mass fraction of organic HAP.

- (5) *Solvent blends.* Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which shall be counted toward the total organic HAP mass fraction of the materials. When test data and manufacturer's data for solvent blends are not available, the permittee may use the default values for the mass fraction of organic HAP in these solvent blends listed in Table 4 or 5 to 40 CFR 63, Subpart OOOO. If the tables are used, the permittee shall use the values in Table 4 for all solvent blends that match Table 4 entries and may only use Table 5 if the solvent blends in the materials used do not match any of the solvent blends in Table 4 and the permittee only knows whether the blend is aliphatic or aromatic. However, if the results of a Method 311 test indicate higher values than those listed on Table 4 or 5 to 40 CFR 63, Subpart OOO, the Method 311 results will take precedence.
- b. *Determine the mass fraction of solids for each coating and printing material.* The permittee shall determine the mass fraction of solids (kg of solids per kg of coating or printing material) for each coating material applied during the compliance period by a test or by information provided by the supplier or the manufacturer of the material, as specified in Conditions VII.B.5.b(1) through VII.B.5.b(3). If test results obtained according to Condition VII.B.5.b(1) or VII.B.5.b(2) for a coating material do not agree with the information obtained under Condition VII.B.5.b(3), the test results will take precedence. To determine mass fraction of solids for each printing material applied during the compliance period, the permittee shall use information provided by the supplier or manufacturer of the material, as specified in Condition VII.B.5.b(3).
- (1) *Method 24 (appendix A to 40 CFR part 60).* The permittee may use Method 24 for determining the mass fraction of solids of coating materials.
- (2) *Alternative method.* The permittee may use an alternative test method for determining solids content of each coating material once the Administrator (U.S. Environmental Protection Agency) has approved it. The permittee shall follow the procedure in 40 CFR 63.7(f) to submit an alternative test method for approval.
- (3) *Information from the supplier or manufacturer of the material.* The permittee may obtain the mass fraction of solids for each coating and printing material from the supplier or manufacturer. If there is disagreement between such information and the test method results for a coating material, then the test method results will take precedence.
- c. *Calculate the organic HAP content of each coating or printing material.* The permittee shall calculate the organic HAP content, kg organic HAP per kg of solids, of each coating and printing material applied during the compliance period, using the following equation:

$$H_c = (W_c)/(W_f) \quad (Eq. 1)$$

Where:

- $H_c$  = Organic HAP content of the coating or printing material, kg organic HAP per kg solids in the coating or printing material.
- $W_c$  = Mass fraction of organic HAP in the coating or printing material, kg organic HAP per kg material, determined according to Condition VII.B.5.a.
- $W_f$  = Mass fraction of solids in coating or printing material, kg solids per kg of coating or printing material, determined according to Condition VII.B.5.b.

d. *Compliance demonstration.* The calculated organic HAP content for each coating and printing material applied during the initial compliance period shall be less than or equal to the emission limit in Condition VII.A.1.a and each thinning and cleaning material applied during the initial compliance period shall contain no organic HAP as defined in 40 CFR 63.4371. The mass fraction of organic HAP for each dyeing and finishing material applied during the initial compliance period, determined according to Condition VII.B.5.a(4), shall be less than or equal to the emission limit in Condition VII.A.1.b. The permittee shall keep all records required by Condition VII.C.1. As part of the Notification of Compliance Status required in Condition VII.D.1, the permittee shall:

- (1) Identify any web coating/printing operation and dyeing/finishing operation for which the compliant material option was used;
- (2) Submit a statement that the web coating/printing operation(s) was (were) in compliance with the emission limitations during the initial compliance period because no coating and printing material for which the organic HAP content exceeds the emission limit in Condition VII.A.1.a were applied and only thinning materials and cleaning materials that contained no organic HAP, as defined in 40 CFR 63.4371, were applied;
- (3) Submit a statement that the dyeing/finishing operation(s) was (were) in compliance with the emission limitations during the initial compliance period because no dyeing and finishing material for which the mass fraction of organic HAP exceeds the emission limit in Condition VII.A.1.b were applied.

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110 and 40 CFR 63.4321(e))

6. To demonstrate initial compliance with the emission limitations using the emission rate without add-on controls option:
- a. The permittee shall meet all the following requirements for any individual web coating/printing operation, for any group of web coating/printing operations in the affected source or for all the web coating/printing operations as a group in the affected source using this option. When calculating the organic HAP emission rate according to the following requirements, do not include any coating, printing, thinning, or cleaning materials applied on web coating/printing operations for which the compliant material option was used. The permittee shall use the following procedures on each regulated material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration.
    - (1) *Determine the mass fraction of organic HAP for each material.* Determine the mass fraction of organic HAP for each coating, printing, thinning, and cleaning material applied during the compliance period according to the requirements in Condition VII.B.5.a.
    - (2) *Determine the mass fraction of solids for each material.* Determine the mass fraction of solids (kg of solids per kg of coating or printing material) for each coating and printing material applied during the compliance period according to the requirements in Condition VII.B.5.b.
    - (3) *Determine the mass of each material.* Determine the mass (kg) of each coating, printing, thinning, or cleaning material applied during the compliance period by measurement or usage records.
    - (4) *Calculate the mass of organic HAP emissions.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all coating, printing, thinning, and cleaning materials applied during the compliance period minus the organic HAP in certain waste materials. Calculate the mass of organic HAP emissions using the following equation:

$$H_e = A + B - R_w \quad (Eq. 1)$$

Where:

- $H_e$  = Mass of organic HAP emissions during the compliance period, kg.
- $A$  = Total mass of organic HAP in the coating and printing materials applied during the compliance period, kg, as calculated in Equation 1A of Condition VII.B.6.a(4)(a).

B = Total mass of organic HAP in the thinning and cleaning materials applied during the compliance period, kg, as calculated in Equation 1B of Condition VII.B.6.a(4)(b).

R<sub>w</sub> = Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste treatment, storage and disposal facility (TSDF) for treatment or disposal during the compliance period, kg, determined according to Condition VII.B.6.a(4)(c). (You may assign a value of zero to R<sub>w</sub> if you do not wish to use this allowance.)

- (a) Calculate the kg organic HAP in the coating and printing materials applied during the compliance period using the following equation:

$$A = \sum_{i=1}^m (M_{c,i}) (W_{c,i}) \quad (Eq. 1A)$$

Where:

A = Total mass of organic HAP in the coating and printing materials applied during the compliance period, kg.

M<sub>c,i</sub> = Total mass of coating or printing material, i, applied during the compliance period, kg.

W<sub>c,i</sub> = Mass fraction of organic HAP in coating or printing material, i, kg organic HAP per kg of material.

m = Number of different coating and printing, materials applied during the compliance period.

- (b) Calculate the kg of organic HAP in the thinning and cleaning materials applied during the compliance period using the following equation:

$$B = \sum_{j=1}^n (M_{t,j}) (W_{t,j}) \quad (Eq. 1B)$$

Where:

B = Total mass of organic HAP in the thinning and cleaning materials applied during the compliance period, kg.

M<sub>t,j</sub> = Total mass of thinning or cleaning material, j, applied during the compliance period, kg.

$W_{t,j}$  = Mass fraction of organic HAP in thinning or cleaning material,  $j$ , kg organic HAP per kg thinning or cleaning material.

$n$  = Number of different thinning and cleaning materials applied during the compliance period.

(c) If the permittee chooses to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF in Equation 1 of Condition VII.B.6.a(4), then the permittee shall determine it according to the following:

(i) The permittee may include in the determination only waste materials that are generated by web coating/printing operations in the affected source for which Equation 1 of Condition VII.B.6.a(4) was used and that will be treated or disposed of by a facility that is regulated as a TSDF under 40 CFR part 262, 264, 265, or 266. The TSDF may be either off-site or on-site. The permittee may not include organic HAP contained in wastewater.

(ii) The permittee shall determine either the amount of the waste materials sent to a TSDF during the compliance period or the amount collected and stored during the compliance period designated for future transport to a TSDF. Do not include in the determination any waste materials sent to a TSDF during a compliance period if it has already been included in the amount collected and stored during that compliance period or a previous compliance period.

(iii) Determine the total mass of organic HAP contained in the waste materials specified in Condition VII.B.6.a(4)(c)(ii).

(iv) The permittee shall document the methodology used to determine the amount of waste materials and the total mass of organic HAP they contain, as required in Condition VII.C.1.g. To the extent that waste manifests include this, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.

(5) *Calculate the total mass of coating and printing solids.* Determine the total mass of coating and printing solids applied, kg, which is the combined mass of the solids contained in all the coating and printing materials applied during the compliance period, using the following equation:

$$H_t = \sum_{i=1}^m (M_{c,i}) (W_{f,i}) \quad (Eq. 2)$$

Where:

$H_t$  = Total mass of solids contained in coating and printing materials applied during the compliance period, kg.

$M_{c,i}$  = Mass of coating or printing material, i, applied during the compliance period, kg.

$W_{f,i}$  = mass fraction of solids in coating or printing material, i, applied during the compliance period, kg solids per kg of coating or printing material.

$m$  = Number of coating and printing materials applied during the compliance period.

- (6) Calculate the organic HAP emission rate for the compliance period, kg organic HAP emitted per kg solids used, using the following equation:

$$H_{yr} = \frac{H_e}{H_t} \quad (Eq. 3)$$

Where:

$H_{yr}$  = Organic HAP emission rate for the compliance period, kg of organic HAP emitted per kg of solids in coating and printing materials applied.

$H_e$  = Total mass organic HAP emissions from all coating, printing, thinning, and cleaning materials applied during the compliance period, kg, as calculated by Equation 1 of Condition VII.B.6.a(4).

$H_t$  = Total mass of coating and printing solids in materials applied during the compliance period, kg, as calculated by Equation 2 of Condition VII.B.6.a(5).

- (7) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period shall be less than or equal to the emission limit in Condition VII.A.1.a. The permittee shall keep all records as required by Condition VII.C.1. As part of the Notification of Compliance Status required by Condition VII.D.1, the permittee shall identify the web coating/printing operation(s) for which the emission rate without add-on controls option was used and submit a statement that the web coating/printing operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than, or equal to, the emission limit in Condition VII.A.1.a.

- b. The permittee shall meet all the following requirements for any individual dyeing/finishing operation, for any group of dyeing/finishing operations in the affected source or for dyeing/finishing operations as a group in the affected source using this option. When calculating the organic HAP emission rate according to the following requirements, do not include any dyeing and finishing materials applied on dyeing/finishing operations for which the compliant material option was used. The permittee shall use the following procedures on each regulated material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. Water added in mixing at the affected source is not a regulated material and should not be included in the determination of the total mass of dyeing and finishing materials applied during the compliance period, using Equation 5 of Condition VII.B.6.b(4).
- (1) *Determine the mass fraction of organic HAP for each material.* Determine the mass fraction of organic HAP for each dyeing and finishing material applied during the compliance period according to the requirements in Condition VII.B.5.a(4).
  - (2) *Determine the mass of each material.* Determine the mass (kg) of each dyeing and finishing material applied during the compliance period by measurement or usage records.
  - (3) *Calculate the mass of organic HAP emissions.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all dyeing and finishing materials applied during the compliance period minus the organic HAP in certain waste materials and wastewater streams. Calculate the mass of organic HAP emissions using following equation:

$$H_e = A - R_w - WW \quad (Eq. 4)$$

Where:

- $H_e$  = Mass of organic HAP emissions during the compliance period, kg.
- $A$  = Total mass of organic HAP in the dyeing and finishing materials applied during the compliance period, kg, as calculated in Equation 4A of Condition VII.B.6.b(3)(a).
- $R_w$  = Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the compliance period, kg, determined according to Condition VII.B.6.b(3)(b). (You may assign a value of zero to  $R_w$  if you do not wish to use this allowance.)

WW = Total mass of organic HAP in wastewater discharged to a POTW or receiving onsite secondary treatment during the compliance period, kg, determined according to Condition VII.B.6.b(3)(c). (You may assign a value of zero to WW if you do not wish to use this allowance.)

- (a) Calculate the kg organic HAP in the dyeing and finishing materials applied during the compliance period using the following equation:

$$A = \sum_{i=1}^m (M_{c,i}) (W_{c,i}) \quad (Eq. 4A)$$

Where:

A = Total mass of organic HAP in the dyeing and finishing materials applied during the compliance period, kg.

$M_{c,i}$  = Mass of dyeing or finishing material, i, applied during the compliance period, kg.

$W_{c,i}$  = Mass fraction of organic HAP in dyeing or finishing material, i, kg organic HAP per kg of material.

m = Number of dyeing and finishing materials applied during the compliance period.

- (b) If the permittee chooses to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF in Equation 4 of Condition VII.B.6.b(3), then the permittee shall determine it according to the following:
- (i) The permittee may include in the determination only waste materials that are generated by dyeing/finishing operations in the affected source for which Equation 4 of Condition VII.B.6.b(3) was used and that will be treated or disposed of by a facility that is regulated as a TSDF under 40 CFR part 262, 264, 265, or 266. The TSDF may be either off-site or on-site. The permittee may not include organic HAP contained in wastewater.
  - (ii) The permittee shall determine either the amount of the waste materials sent to a TSDF during the compliance period or the amount collected and stored during the compliance period designated for future transport to a TSDF. Do not include in your determination any waste materials sent to a TSDF during a compliance period if it has already been included in the amount collected and stored during that compliance period or a previous compliance period.

- (iii) Determine the total mass of organic HAP contained in the waste materials specified in Condition VII.B.6.b(3)(b)(ii).
- (iv) The permittee shall document the methodology used to determine the amount of waste materials and the total mass of organic HAP they contain, as required in Condition VII.C.1.g. To the extent that waste manifests include this, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.
- (c) If the permittee chooses to account for the mass of organic HAP contained in wastewater discharged to a POTW or treated onsite prior to discharge in Equation 4 of Condition VII.B.6.b(3), then the permittee shall determine it according to Condition VII.B.6.c.
- (4) *Calculate the total mass of dyeing and finishing materials.* Determine the total mass of dyeing and finishing materials applied, kg, which is the combined mass of all the dyeing and finishing materials applied during the compliance period, using the following equation:

$$M_t = \sum_{i=1}^m (M_{c,i}) \quad (Eq. 5)$$

Where:

- $M_t$  = Total mass of dyeing and finishing materials applied during the compliance period, kg.
- $M_{c,i}$  = Mass of dyeing or finishing material, i, applied during the compliance period, kg.
- $m$  = Number of dyeing and finishing materials applied during the compliance period.

- (5) Calculate the organic HAP emission rate, kg organic HAP emitted per kg dyeing and finishing material applied, using the following equation:

$$H_{yr} = \frac{H_e}{M_t} \quad (Eq. 6)$$

Where:

- $H_{yr}$  = The organic HAP emission rate for the compliance period, kg of organic HAP emitted per kg of dyeing and finishing materials.

$H_e$  = Total mass of organic HAP emissions during the compliance period, kg, as calculated by Equation 4 of Condition VII.B.6.b(3).

$M_t$  = Total mass of dyeing and finishing materials applied during the compliance period, kg, as calculated by Equation 5 of Condition VII.B.6.b(4).

- (6) *Compliance demonstration.* The organic HAP emission rate for the initial compliance period must be less than or equal to the emission limit in Condition VII.A.1.b. The permittee shall keep all records as required by Condition VII.C.1. As part of the Notification of Compliance Status required by Condition VII.D.1, the permittee shall identify the dyeing/finishing operation(s) for which the emission rate without add-on controls option was used and submit a statement that the dyeing/finishing operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the emission limit in Condition VII.A.1.b.
- c. If the permittee chooses to account for the mass of organic HAP contained in wastewater discharged to a POTW or treated onsite prior to discharge in Equation 4 of Condition VII.B.6.b(3), then the permittee shall determine it according to Conditions VII.B.6.c(1) through VII.B.6.c(5). The permittee may include in the determination only wastewater streams that are generated by dyeing/finishing operations in the affected source for which Equation 4 of Condition VII.B.6.b(3) was used. The permittee shall determine the mass of organic HAP from the average organic HAP concentration and mass flow rate of each wastewater stream generated by the affected dyeing/finishing operation (or group of dyeing/finishing operations discharging to a common wastewater stream) for which this allowance was used. The permittee shall consider the actual or anticipated production over the compliance period and include all wastewater streams generated by the affected dyeing/finishing operation(s) during this period. A performance test of the organic HAP loading to the wastewater shall be performed for each operating scenario, as defined in 40 CFR 63.4371, during the compliance period.
- (1) *Procedure to determine average organic HAP concentration.* The permittee shall determine the average organic HAP concentration,  $H_w$ , of each wastewater stream according to the following:
- (a) *Sampling.* Wastewater samples may be grab samples or composite samples. Samples shall be taken at approximately equally spaced time intervals over a 1-hour period (or over the period that wastewater is being discharged from a batch process if it is shorter than a 1-hour period). Each 1-hour period constitutes a run and a performance test shall consist of a minimum of 3 runs.

- (b) *Methods*. The permittee may use any of the following methods specified to determine the organic HAP content of the wastewater stream. The method shall be an analytical method for wastewater which has the organic HAP compound discharged to the wastewater as a target analyte.
- (i) *Method 305*. Use procedures specified in Method 305 of 40 CFR part 63, appendix A.
  - (ii) *Methods 624 and 625*. Use procedures specified in Method 624 and Method 625 of 40 CFR part 136, appendix A and comply with the sampling protocol requirements specified in Condition VII.B.6.c(1)(c). If these methods are used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 136.5 shall be followed. For Method 625, make corrections to the compounds for which the analysis is being conducted based on the accuracy as recovery factors in Table 7 of the method.
  - (iii) *Methods 1624 and 1625*. Use procedures specified in Method 1624 and Method 1625 of 40 CFR part 136, appendix A and comply with the sampling protocol requirements specified in Condition VII.B.6.c(1)(c). If these methods are used to analyze one or more compounds that are not on the method's published list of approved compounds, the Alternative Test Procedure specified in 40 CFR 136.4 and 136.5 shall be followed.
  - (iv) *Other EPA method(s)*. Use procedures specified in the method and comply with the requirements specified in Condition VII.B.6.c(1)(c) and either Condition VII.B.6.c(1)(d)(i) or VII.B.6.c(1)(d)(ii).
  - (v) *Methods other than EPA method*. Use procedures specified in the method and comply with the requirements specified in Condition VII.B.6.c(1)(c) and Condition VII.B.6.c(1)(d)(i).
- (c) *Sampling plan*. If the permittee has been expressly referred to this condition by provisions of this permit, the permittee shall prepare a sampling plan. Wastewater samples shall be collected using sampling procedures which minimize loss of organic compounds during sample collection and analysis and maintain sample integrity. The sampling plan shall include procedures for determining recovery efficiency of the relevant organic HAP. An example of an example sampling plan would be one that incorporates similar sampling and sample handling requirements to those of Method 25D of 40 CFR part 60, appendix A. The permittee shall maintain the sampling plan at the facility.

- (d) *Validation of methods.* The permittee shall validate EPA methods other than Methods 305, 624, 625, 1624, 1625 using one of the following specified procedures.
- (i) *Validation of EPA methods and other methods.* The method used to measure organic HAP concentrations in the wastewater shall be validated according to section 5.1 or 5.3, and the corresponding calculations in section 6.1 or 6.3, of Method 301 of 40 CFR part 63, appendix A. The data are acceptable if they meet the criteria specified in section 6.1.5 or 6.3.3 of Method 301 of 40 CFR part 63, appendix A. If correction is required under section 6.3.3 of Method 301 of 40 CFR part 63, appendix A, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 of 40 CFR part 63, appendix A, are not required.
  - (ii) *Validation for EPA methods.* Follow the procedures as specified in “Alternative Validation Procedure for EPA Waste Methods” 40 CFR part 63, appendix D.
- (e) *Calculate the average concentration.* The permittee shall calculate the average concentration for each individually speciated organic HAP compound by adding the individual values determined for the specific compound in each sample and dividing by the number of samples.
- (f) *Adjustment for concentrations determined downstream of the point of determination.* The permittee shall make corrections to the specific compound average concentration or total organic HAP average concentration when the concentration is determined downstream of the point of determination at a location where either wastewater streams from outside of the affected dyeing/finishing operation or group of dyeing/finishing operations have been mixed with the affected wastewater stream or one or more affected wastewater streams have been treated. The permittee shall make the adjustments either to the individual data points or to the final average organic HAP concentration.
- (2) *Procedures to determine mass flow rate.* For each operating scenario, as defined in 40 CFR 63.4371, for which the permittee has determined the organic HAP content of the wastewater stream, the permittee shall determine the annual average mass flow rate,  $F_w$ , of the wastewater stream either at the point of determination or downstream of the point of determination with adjustment for flow rate changes made according to Condition VII.B.6.c(2)(b). The annual average mass flow rate for the wastewater stream shall be representative of actual or anticipated operation of the dyeing/finishing operation(s) generating the wastewater over the compliance

period. The permittee shall determine the annual average mass flow rate of each wastewater stream according to Conditions VII.B.6.c(2)(a) and VII.B.6.c(2)(b).

(a) *Procedures.* The following procedures specified are considered acceptable procedures for determining the mass flow rate. They may be used in combination, and no one procedure shall take precedence over another.

(i) *Knowledge of the wastewater.* The permittee may use knowledge of the wastewater stream and/or the process to determine the annual average mass flow rate. The permittee shall use the maximum expected annual average production capacity of the dyeing/finishing operation(s), knowledge of the process, and/or mass balance information to either estimate directly the average wastewater mass flow rate for the compliance period or estimate the total wastewater mass flow for the compliance period and then factor the total mass by the percentage of time in the compliance period the operating scenario is expected to represent. Where the permittee uses knowledge to determine the annual average mass flow rate, the permittee shall provide sufficient information to document the mass flow rate.

(ii) *Historical records.* The permittee may use historical records to determine the average annual mass flow rate. Derive the highest annual average mass flow rate of wastewater from historical records representing the most recent 5 years of operation, or if the dyeing/finishing operation(s) has(have) been in service for less than 5 years but at least 1 year, from historical records representing the total operating life of the process unit. Where historical records are used to determine the annual average mass flow rate, the permittee shall provide sufficient information to document the mass flow rate.

(iii) *Measurement of mass flow rate.* If the permittee elects to measure mass flow rate, the permittee shall comply with the requirements of this paragraph (condition). Measurements shall be made at the point of determination, or at a location downstream of the point of determination with adjustments for mass flow rate changes made according to Condition VII.B.6.c(2)(b). Where measurement data are used to determine the annual average mass flow rate, the permittee shall provide sufficient information to document the mass flow rate.

(b) *Adjustment for flow rates determined downstream of the point of determination.* The permittee shall make corrections to the average annual mass flow rate of a wastewater stream when it is determined downstream of the point of determination at a location where either wastewater streams from outside of the affected dyeing/finishing operation or group of

dyeing/finishing operations have been mixed with the affected wastewater stream or one or more wastewater streams have been treated. The permittee shall make corrections for such changes in the annual average mass flow rate.

- (3) *Wastewater treatment.* The permittee shall document that the wastewater is either discharged to a POTW or onsite secondary wastewater treatment.
- (4) *Determine the mass of organic HAP in the affected wastewater.* Determine the total mass of organic HAP, WW, contained in the wastewater streams characterized by the procedures in Conditions VII.B.6.c(1) and VII.B.6.c(2), using the following equation:

$$WW = \sum_{k=1}^o (H_{w,k}) (F_{w,k}) \times 10^{-3} \quad (Eq. 7)$$

Where:

- WW = The total mass of organic HAP contained in the wastewater streams characterized by the procedures in Conditions VII.B.6.c(1) and VII.B.6.c(2), kg/yr
- $H_{w,k}$  = Average organic HAP concentration of wastewater stream k, ppmw
- $F_{w,k}$  = Annual average mass flow rate of wastewater stream k, Mg/yr
- o = Number of wastewater streams characterized by the procedures in Conditions VII.B.6.c(1) and VII.B.6.c(2).

This is the allowance for organic HAP discharged to wastewater and not emitted to the atmosphere, WW, in Equation 4 of Condition VII.B.6.b(3).

- (5) *Determine the fraction of organic HAP applied that is discharged to the wastewater.* For the purpose of taking credit for the wastewater allowance in continuous compliance demonstrations, determine the fraction of organic HAP applied in affected dyeing/finishing processes that is discharged to the wastewater, *i.e.*, divide WW by the mass of organic HAP in the dyeing and finishing materials applied during the compliance period, A, as calculated in Equation 4A of Condition VII.B.6.b(3)(a). The wastewater allowance for this fraction of organic HAP that is not emitted from the affected dyeing/finishing operation(s) may be taken for each compliance period that the operating scenario, as defined in 40 CFR 63.4371, does not change from conditions during the performance test in a way that could increase the fraction of organic HAP emitted (*e.g.*, an increase in process temperature or decrease in

process pressure or a change in the type or mass fraction of organic HAP entering the dyeing/finishing operation.) The allowance, WW, must be calculated by multiplying the fraction of organic HAP applied in affected processes that is discharged to the wastewater determined from the most recent performance test by the mass of organic HAP in the dyeing and finishing materials applied during the compliance period, A, as calculated in Equation 4A of Condition VII.B.6.b(3)(a).

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110 and 40 CFR 63.4331)

7. The permittee shall keep a record of the applicability determination on site at the source for a period of five (5) years after the determination, or until the source becomes an affected source subject to the requirements of 40 CFR Part 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters). The determination must include the analysis demonstrating why the permittee believes the source is unaffected pursuant to 40 CFR 63.10(b)(3).

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110 and 40 CFR 63.10(b)(3))

### **C. Recordkeeping**

1. The permittee shall collect and keep a record of the following data and information. Failure to collect and keep these records is a deviation from the applicable standard.
  - a. A copy of each notification and report submitted to comply with 40 CFR 63, Subpart OOOO, and the documentation supporting each notification and report.
  - b. A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data or test data used to determine the mass fraction of organic HAP for coating, printing, slashing, dyeing, finishing, thinning, and cleaning materials; and the mass fraction of solids for coating and printing materials. If the permittee conducted testing to determine mass fraction of organic HAP of coating materials or the mass fraction of solids of coating materials, the permittee shall keep a copy of the complete test report. If the permittee uses information provided by the manufacturer or supplier of the material that was based on testing, the permittee shall keep the summary sheet of results provided by the manufacturer or supplier. The permittee is not required to obtain the test report or other supporting documentation from the manufacturer or supplier.
  - c. For each compliance period, the records specified in Condition VII.C.1.c(1) for web coating/printing operations and the records specified in Condition VII.C.1.c(2) for dyeing/finishing operations.

- (1) A record of the web coating/printing operations on which each compliance option was used and the time periods (beginning and ending dates) each option was used. For each month, a record of all required calculations for the compliance option(s) used, as specified in the following:
  - (a) For the compliant material option, a record of the calculation of the organic HAP content, as purchased, for each coating and printing material applied, using Equation 1 of Condition VII.B.5.c.
  - (b) For the emission rate without add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coating, printing, thinning and cleaning materials applied each compliance period using Equations 1, 1A, and 1B of Condition VII.B.6.a(4) and, if applicable, the calculation used to determine the mass of organic HAP in waste materials according to Condition VII.B.6.a(4)(c); the calculation of the total mass of the solids contained in all coating and printing materials applied each compliance period using Equation 2 of Condition VII.B.6.a(5); and the calculation of the organic HAP emission rate for each compliance period using Equation 3 of Condition VII.B.6.a(6).
- (2) A record of the dyeing/finishing operations on which each compliance option was used and the time periods (beginning and ending dates) each option was used. For each month, a record of all required calculations for the compliance option(s) used, as specified in the following:
  - (a) For the compliant material option, a purchase record of the mass fraction of organic HAP for each dyeing and finishing material applied, according to Condition VII.B.5.a(4).
  - (b) For the emission rate without add-on controls option, the calculation for the total mass of organic HAP emissions for the dyeing and finishing materials applied each compliance period using Equations 4 and 4A of Condition VII.B.6.b(3) and, if applicable, the calculations used to determine the mass of organic HAP in waste materials according to Condition VII.B.6.b(3)(b) and the mass of organic HAP contained in wastewater discharged to a POTW or treated onsite prior to discharge according to Condition VII.B.6.b(3)(c); the calculation of the total mass of dyeing and finishing materials applied each compliance period using Equation 5 of Condition VII.B.6.b(4); and the calculation of the organic HAP emission rate for each compliance period using Equation 6 of Condition VII.B.6.b(5).
- d. A record of the name and mass of each regulated material applied in the web coating and printing subcategory and the dyeing and finishing subcategory during each compliance period. If the compliant material option for all regulated

materials at the source is being used, the permittee may maintain purchase records for each material used rather than a record of the mass used.

- e. A record of the mass fraction of organic HAP for each regulated material applied during each compliance period.
- f. A record of the mass fraction of coating and printing solids for each coating and printing material applied during each compliance period.
- g. If the permittee uses an allowance in Equation 1 of Condition VII.B.6.a(4) or Equation 4 of Condition VII.B.6.b(3) for organic HAP contained in waste materials sent to, or designated for shipment to, a treatment, storage, and disposal facility (TSDF) according to Condition VII.B.6.a(4)(c) or VII.B.6.b(3)(b), records of the following information shall be kept:
  - (1) The name and address of each TSDF to which the permittee sent waste materials for which the permittee used an allowance in Equation 1 of Condition VII.B.6.a(4) or Equation 4 of Condition VII.B.6.b(3), a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the facility, and the date of each shipment.
  - (2) Identification of the web coating/printing or dyeing/finishing operations producing waste materials included in each shipment and the compliance period(s) in which the permittee used the allowance for these materials in Equation 1 of Condition VII.B.6.a(4) or Equation 4 of Condition VII.B.6.b(3).
  - (3) The methodology used in accordance with Condition VII.B.6.a(4)(c) or VII.B.6.b(3)(b) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each compliance period; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.
- h. If the permittee uses an allowance in Equation 4 of Condition VII.B.6.b(3) for organic HAP contained in wastewater discharged to a POTW or treated onsite prior to discharge according to Condition VII.B.6.c, the permittee shall keep records of the following information:
  - (1) Documentation that the wastewater was either discharged to a POTW or onsite secondary wastewater treatment.

- (2) Calculation of the allowance, WW, using the fraction of organic HAP applied in affected processes that is discharged to the wastewater determined from the most recent performance test and the mass of organic HAP in the dyeing and finishing materials applied during the compliance period, A, calculated in Equation 4 of Condition VII.B.6.b(3).

- i. The permittee shall keep records of the date, time, and duration of each deviation.

These records shall be in a form suitable and readily available for expeditious review and inspection and, where appropriate, may be maintained as electronic spreadsheets or as a database. Each record shall be kept for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record. Each record shall be kept on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report or record. The remaining 3 years for each record may be kept off site.

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110, 40 CFR 63.4312(a) through (i) and 40 CFR 63.4313)

#### **D. Reporting**

1. *Notification of Compliance Status.* The permittee shall submit the Notification of Compliance Status required by 40 CFR 63.9(h) no later than 30 calendar days following the end of the initial compliance period described in Condition VII.B.3.b or VII.B.4.b that applies to the affected source. The Notification of Compliance Status shall contain the information specified in the following and in 40 CFR 63.9(h).
  - a. Company name and address.
  - b. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
  - c. Date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in Condition VII.B.3.b or VII.B.4.b that applies to the affected source.
  - d. Identification of the compliance option or options specified in Condition VII.B.1 that were used during the initial compliance period on each web coating/printing operation in each web coating/printing affected source and the compliance option or options specified in Condition VII.B.2 that were used on each dyeing/finishing operation in each dyeing/finishing affected source.
  - e. Statement of whether or not the affected source achieved the emission limitations for the initial compliance period.

- f. If there was a deviation, include the following information:
  - (1) A description and statement of the cause of the deviation.
  - (2) If the permittee failed to meet the applicable emission limit in Condition VII.A.1, include all the calculations used to determine the kilogram (kg) organic HAP emitted per kg of solids applied in coating and printing material or the weight percent organic HAP compounds in dyeing or finishing material to demonstrate failure to meet the applicable emission limit. The permittee does not need to submit information provided by the materials suppliers or manufacturers or test reports.
- g. For each of the following data items listed that is required by the compliance option(s) used to demonstrate compliance with the emission limit, include an example of how the value was determined, including calculations and supporting data. Supporting data can include a copy of the information provided by the supplier or manufacturer of the example regulated material or a summary of the results of testing conducted according to Condition VII.B.5.a or VII.B.5.b. The permittee does not need to submit copies of any test reports.
  - (1) Mass fraction of organic HAP and mass fraction of solids for one coating or printing formulation including thinning materials, mass fraction of organic HAP for one cleaning material and mass fraction of organic HAP for all of the regulated materials as purchased used in one dyeing/ finishing operation.
  - (2) Mass of coating or printing formulation used in web coating/printing operation or of dyeing and finishing materials used in the dyeing/finishing operation during the compliance period.
  - (3) The amount of waste materials and the mass of organic HAP contained in the waste materials for which the permittee is claiming an allowance in Equation 1 of Condition VII.B.6.a(4) or Equation 4 of Condition VII.B.6.b(3).
  - (4) The mass of organic HAP in the dyeing and finishing materials applied during the compliance period and the mass of organic HAP in wastewater discharged to a POTW or receiving onsite secondary treatment for which the permittee is claiming an allowance in Equation 4 of Condition VII.B.6.b(3).
- h. The calculation of kg organic HAP per kg of coating and printing solids applied and of kg organic HAP per kg of dyeing and finishing material as purchased for the compliance option(s) used, as specified in the following:

- (1) For the compliant material option as specified in Condition VII.B.1.a for web coating/printing operations, provide an example calculation of the organic HAP content for one coating and one printing material, as appropriate, using Equation 1 of Condition VII.B.5.c.
- (2) For the emission rate without add-on controls option as specified in Condition VII.B.1.b for web coating/printing operations, provide the calculation of the total mass of organic HAP emissions; the calculation of the total mass of coating and printing solids applied; and the calculation of the organic HAP emission rate, using Equations 1, 2, and 3, respectively, of Condition VII.B.6.a.
- (3) For the emission rate without add-on controls option as specified in Condition VII.B.2.b for dyeing/finishing operations, provide the calculation of the total mass of organic HAP emissions; the calculation of the total mass of dyeing and finishing materials applied; and the calculation of the organic HAP emission rate, using Equations 4, 5, and 6, respectively, of Condition VII.B.6.b.

A copy of the Notification of Compliance Status shall be provided to EPA Region III, to the attention of the Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP Coordinator, at the following address:

EPA Region III  
Air Enforcement Branch  
3AP12  
1650 Arch Street  
Philadelphia, PA 19103

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110, 40 CFR 63.4310(c) and 40 CFR 63.10(a))

2. The permittee shall submit to the Director, Valley Region, semiannual compliance reports according to the following requirements:
  - a. *Dates.* The permittee shall prepare and submit each semiannual compliance report according to the following dates:
    - (1) The first semiannual compliance report shall cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in Condition VII.B.3.b or VII.B.4.b that applies to the affected source and ends on June 30 or December 31, whichever date is the first date at least 6 months after the end of the initial compliance period.

- (2) Each subsequent semiannual compliance report shall cover the subsequent semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
  - (3) Each semiannual compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
  - (4) The first and subsequent compliance reports may be submitted according to the dates established for reporting in Condition XI.C.3 instead of according to the date specified in Condition VII.D.2.a(3).
- b. *Inclusion with Title V report.* The permittee shall report all deviations as defined in 40 CFR 63, Subpart OOOO in the semiannual monitoring report required by Condition XI.C.3. If the permittee submits a semiannual compliance report along with, or as part of, the semiannual monitoring report required by Condition XI.C.3, and the semiannual compliance report includes all required information concerning deviations from any emission limitation in Condition VII.A.1, its submission shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to DEQ.
- c. *General Requirements.* Each semiannual compliance report shall contain the following information:
- (1) Company name and address.
  - (2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
  - (3) Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31.
  - (4) Identification of the compliance option or options specified in Condition VII.B.1 that were used on each web coating/printing operation during the reporting period and the compliance option or options specified in Condition VII.B.2 that were used on each dyeing/finishing operation during the reporting period. If the permittee switched between compliance options during the reporting period, the permittee shall report the beginning and ending dates for each option used.

- (5) If the emission rate without add-on controls compliance option was used for web coating/printing operations as specified in Condition VII.B.1.b or for dyeing/finishing operations as specified in Condition VII.B.2.b, the calculation results for each compliance period ending each month during the 6-month reporting period.
- d. *No deviations.* If there were no deviations from the emission limitations in Condition VII.A.1, the semiannual compliance report shall include a statement that there were no deviations from the emission limitations during the reporting period.
- e. *Deviations: compliant material option.* If the compliant material option was used and there was a deviation from the applicable organic HAP content requirements in Condition VII.A.1, the semiannual compliance report shall contain the following information:
- (1) Identification of each coating, printing, dyeing or finishing material applied that deviated from the emission limit and each thinning or cleaning material applied in web coating/printing operations that contained organic HAP, and the dates and time periods each was applied.
  - (2) The calculation of the organic HAP content using Equation 1 of Condition VII.B.5.c for each coating or printing material identified in Condition VII.D.2.e(1). The permittee does not need to submit background data supporting this calculation (*e.g.*, information provided by material suppliers or manufacturers, or test reports).
  - (3) The determination of mass fraction of organic HAP for each regulated material identified in Condition VII.D.2.e(1). The permittee does not need to submit background data supporting this calculation (*e.g.*, information provided by material suppliers or manufacturers, or test reports).
  - (4) A statement of the cause of each deviation.
- f. *Deviations: emission rate without add-on controls option.* If the emission rate without add-on controls option was used and there was a deviation from the applicable emission limit in Condition VII.A.1, the semiannual compliance report shall contain the following information:
- (1) The beginning and ending dates of each compliance period during which the organic HAP emission rate exceeded the applicable emission limit in Condition VII.A.1.

(2) The calculations used to determine the organic HAP emission rate for the compliance period in which the deviation occurred. The permittee shall submit the calculations for Equations 1, 1A and 1B, 2, and 3 in Condition VII.B.6.a for web coating/printing operations; and for Equations 4, 4A, 5, and 6 in Condition VII.B.6.b for dyeing/finishing operations; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to Condition VII.B.6.a(4)(c) or VII.B.6.b(3)(b); and, for dyeing/finishing operations, if applicable, the mass of organic HAP in wastewater streams calculation for Equation 7 in Condition VII.B.6.c(4). The permittee does not need to submit background data supporting these calculations (*e.g.*, information provided by materials suppliers or manufacturers, or test reports).

(3) A statement of the cause of each deviation.

A copy of each semiannual compliance report shall be provided to EPA Region III, to the attention of the Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP Coordinator, at the following address:

EPA Region III  
Air Enforcement Branch  
3AP12  
1650 Arch Street  
Philadelphia, PA 19103

(9 VAC 5-60-90, 9 VAC 5-60-100, 9 VAC 5-80-110, 40 CFR 63.4311(a) and 40 CFR 63.10(a))

## **VIII. Facility Wide Conditions - Hazardous Air Pollutants**

Beginning September 1, 2007, the following requirements will apply:

### **A. Limitations**

1. The Erie City VC boiler (B7) shall consume no more than 31,508 tons of coal per year, calculated monthly as the sum of each consecutive 12-month period.  
(9 VAC 5-80-110)
2. The maximum chlorine content of the coal to be burned in the Erie City VC boiler (B7) shall not exceed 0.030% by weight per shipment as determined by ASTM Method D-2361.  
(9 VAC 5-80-110)
3. The hazardous air pollutant (HAP) emissions, as defined by 112(b) of the Clean Air Act, from the facility shall not exceed 9.9 tons per year of any individual HAP or 24.9 tons per year of any combination, calculated monthly as the sum of each consecutive 12-month period. HAPs which are not accompanied by a specific CAS number (as listed in Attachment B) shall be calculated as the sum of all compounds containing the named chemical when determining compliance with the individual HAP emissions limitation of 9.9 tons per year.  
(9 VAC 5-80-110)

### **B. Monitoring and Recordkeeping**

1. The permittee shall obtain a certification from the fuel supplier with each shipment of coal. In addition to the information required by Condition III.B.5, each fuel supplier certification shall include the following:
  - a. The chlorine content (in percent) of the coal; and
  - b. The method used to determine the chlorine content of the coal.  
(9 VAC 5-80-110)
2. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with the emission limit in Condition VIII.A.3 of this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
  - a. The monthly and annual throughput of coal (in tons) for the Erie City VC boiler (B7). The annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.

- b. Monthly and annual throughput of each HAP-containing material used at the facility. This includes, but is not limited to, materials used in all manufacturing processes, fuel burning equipment and miscellaneous sources such as insignificant emission units and maintenance, repair, and construction activities (coatings, adhesives, lubricants, etc.). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- c. Monthly and annual individual and total HAP emissions from the facility. This includes, but is not limited to, materials used in all manufacturing processes, fuel burning equipment and miscellaneous sources such as insignificant emission units and maintenance, repair, and construction activities (coatings, adhesives, lubricants, etc.). Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
- d. Material Safety Data Sheets (MSDS) or other vendor information showing HAP content for each material used at the facility.
- e. All coal fuel supplier certifications.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110)

### **C. Reporting**

A semiannual report for the preceding six-month period containing the following information to determine compliance with the individual and total HAP emission limits established in Condition VIII.A.3 shall be submitted to the Director, Valley Region, no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include, at a minimum:

- a. Monthly and annual throughput of coal for the Erie City VC boiler (B7).
- b. Monthly and annual throughput of each HAP-containing material used at the facility.
- c. Monthly and annual individual and total HAP emissions from the facility.

The information listed above may be included in the reports required by Condition XI.C.3.

(9 VAC 5-80-110)

**IX. Insignificant Emission Units**

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
CS	Carpet Shearing (2)	9 VAC 5-80-720 B	PM-10	
-	Fork Trucks	9 VAC 5-80-720 B	VOC, PM-10	
Pellet	Pellet Silos	9 VAC 5-80-720 B	PM-10	
YP	Yarn Twisting, Coning, Knitting, etc.	9 VAC 5-80-720 B	VOC, PM-10	
-	Maintenance Tools (drills, etc.)	9 VAC 5-80-720 B	PM-10	
FP	Diesel Fire Pump	9 VAC 5-80-720 B	VOC, PM-10, NO <sub>x</sub> , SO <sub>2</sub> , CO	
AshS	Ash Silo	9 VAC 5-80-720 B	PM-10	
CT	Cooling Towers (3)	9 VAC 5-80-720 B	VOC, PM-10	

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

**X. Permit Shield & Inapplicable Requirements**

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
None identified		

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.  
(9 VAC 5-80-140)

## **XI. General Conditions**

### **A. Federal Enforceability**

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.

(9 VAC 5-80-110 N)

### **B. Permit Expiration**

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
5. The protection under subsections F.1 and F.5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

### **C. Recordkeeping and Reporting**

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
  - a. The date, place as defined in the permit, and time of sampling or measurements.
  - b. The date(s) analyses were performed.
  - c. The company or entity that performed the analyses.
  - d. The analytical techniques or methods used.
  - e. The results of such analyses.
  - f. The operating conditions existing at the time of sampling or measurement.

(9 VAC 5-80-110 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

(9 VAC 5-80-110 F)

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:
  - a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.
  - b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:
    - (1) Exceedance of emissions limitations or operational restrictions;
    - (2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

(3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements occurred during this semi-annual reporting period.”

(9 VAC 5-80-110 F)

#### **D. Annual Compliance Certification**

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.
2. The identification of each term or condition of the permit that is the basis of the certification.
3. The compliance status.
4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
6. Such other facts as the permit may require to determine the compliance status of the source.
7. One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)  
U. S. Environmental Protection Agency, Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029.

(9 VAC 5-80-110 K.5)

**E. Permit Deviation Reporting**

The permittee shall notify the Director, Valley Region, within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition XI.C.3 of this permit.

(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

**F. Failure/Malfunction Reporting**

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Valley Region, by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Valley Region.

(9 VAC 5-20-180 C)

**G. Severability**

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.

(9 VAC 5-80-110 G.1)

**H. Duty to Comply**

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.

(9 VAC 5-80-110 G.2)

#### **I. Need to Halt or Reduce Activity not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(9 VAC 5-80-110 G.3)

#### **J. Permit Modification**

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios. (9 VAC 5-80-190 and 9 VAC 5-80-260)

#### **K. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege. (9 VAC 5-80-110 G.5)

#### **L. Duty to Submit Information**

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality. (9 VAC 5-80-110 G.6)
2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G. (9 VAC 5-80-110 K.1)

#### **M. Duty to Pay Permit Fees**

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. (9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

**N. Fugitive Dust Emission Standards**

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;
4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 and 9 VAC 5-50-90)

**O. Startup, Shutdown, and Malfunction**

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-50-20 E and 9 VAC 5-40-20 E)

**P. Alternative Operating Scenarios**

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted

facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1. (9 VAC 5-80-110 J)

#### **Q. Inspection and Entry Requirements**

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

#### **R. Reopening For Cause**

The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

1. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

3. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

#### **S. Permit Availability**

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.

(9 VAC 5-80-150 E)

#### **T. Transfer of Permits**

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.  
(9 VAC 5-80-160)
2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.  
(9 VAC 5-80-160)
3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.  
(9 VAC 5-80-160)

#### **U. Malfunction as an Affirmative Defense**

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.
2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
  - a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
  - b. The permitted facility was at the time being properly operated.

- c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
  - d. The permittee notified the Board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F.2.b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.
- 3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
  - 4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

#### **V. Permit Revocation or Termination for Cause**

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80, Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe, any permit for any of the grounds for revocation or termination or for any other violations of these regulations.

(9 VAC 5-80-190 C and 9 VAC 5-80-260)

#### **W. Duty to Supplement or Correct Application**

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.

(9 VAC 5-80-80 E)

## **X. Stratospheric Ozone Protection**

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.  
(40 CFR Part 82, Subparts A-F)

## **Y. Asbestos Requirements**

The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).  
(9 VAC 5-60-70 and 9 VAC 5-80-110 A.1)

## **Z. Accidental Release Prevention**

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.  
(40 CFR Part 68)

## **AA. Changes to Permits for Emissions Trading**

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.  
(9 VAC 5-80-110 I)

## **BB. Emissions Trading**

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

## **SOURCE TESTING REPORT FORMAT**

### Report Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Test Dates.
4. Tester; name, address and report date

### Certification

1. Signed by team leader/certified observer (include certification date)
2. Signed by responsible company official
3. \*Signed by reviewer

### Copy of approved test protocol

### Summary

1. Reason for testing
2. Test dates
3. Identification of unit tested & the maximum rated capacity
4. \*For each emission unit, a table showing:
  - a. Operating rate
  - b. Test Methods
  - c. Pollutants tested
  - d. Test results for each run and the run average
  - e. Pollutant standard or limit
5. Summarized process and control equipment data for each run and the average, as required by the test protocol
6. A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results
7. Any other important information

### Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Sampling port location and dimensioned cross section Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

### Test Results

1. Detailed test results for each run
2. \*Sample calculations
3. \*Description of collected samples, to include audits when applicable

### Appendix

1. \*Raw production data
2. \*Raw field data
3. \*Laboratory reports
4. \*Chain of custody records for lab samples
5. \*Calibration procedures and results
6. Project participants and titles
7. Observers' names (industry and agency)
8. Related correspondence
9. Standard procedures

\* Not applicable to visible emission evaluations



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

### VALLEY REGIONAL OFFICE

4411 Early Road, P.O. Box 3000, Harrisonburg, Virginia 22801  
(540) 574-7800 Fax (540) 574-7878

[www.deq.virginia.gov](http://www.deq.virginia.gov)

L. Preston Bryant, Jr.  
Secretary of Natural Resources

David K. Paylor  
Director

Amy Thatcher Owens  
Regional Director

February 13, 2007

Mr. Lane Leonard  
Senior Director of Division Manufacturing  
Mohawk Industries, Inc. - Lees Carpets Division  
404 Anderson Street  
Glasgow, Virginia 24555

Location: Rockbridge County  
Registration No.: 80269  
Plant ID No.: 51-163-0001

Dear Mr. Leonard:

Attached is a significant amendment to your new source review permit dated March 22, 2002, as amended June 29, 2005 and August 31, 2006, to modify and operate a PVC carpet backing line (PVC1) and a calcium carbonate storage silo (PVCS-C1) in accordance with the provisions of the Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The permit change is reflected in condition 8. This permit replaces your permit dated March 22, 2002, as amended June 29, 2005 and August 31, 2006.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on December 5, 2006.

This permit approval to modify and operate shall not relieve Mohawk Industries, Inc. - Lees Carpets Division of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-200 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

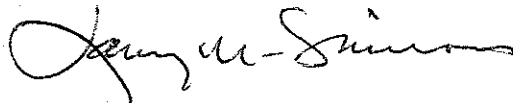
As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director  
Department of Environmental Quality  
P. O. Box 1105  
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please call Bobby Lute at (540) 574-7820.

Sincerely,

A handwritten signature in black ink, appearing to read "Larry M. Simmons".

Larry M. Simmons, P.E.  
Deputy Regional Director

Attachment: Permit

cc: Director, OAPP (electronic file submission)  
Manager, Data Analysis (electronic file submission)

**Multicyclone Compliance Assurance Monitoring (CAM) Plan  
 (Unit: B7)**

Indicator	Indicator 1	Indicator 2	Indicator 3
<b>Measurement approach</b>	Performance Testing	Pressure Drop	Periodic Structural Inspections
	Once every five years, testing on the Erie City VC boiler stack according to EPA Method 5 (40 CFR 60, Appendix A) shall be conducted to verify the particulate emissions rate for the Erie City VC boiler and determine normal operating conditions for the entire multicyclone unit that consists of two multicyclones.	Continuous monitoring of the pressure drop to determine if the inlet velocity for the entire multicyclone unit is operating within normal operating conditions determined during the testing conducted in accordance with EPA Method 5.	Monthly external inspection of surfaces and joints of each multicyclone by a qualified employee to determine the presence of any leaks or deterioration.  Annual internal inspection of each multicyclone by a qualified employee to determine structural integrity of the unit and to ensure no excessive build-up or channeling is present.
<b>Indicator range</b>	Maximum 0.28 pounds particulate matter per million Btu heat input or 43.4 pounds particulate mater per hour	An excursion is defined as a 20-minute continuous pressure drop of 15% or greater above or below the normal pressure drop determined during the testing conducted in accordance with EPA Method 5. Excursions trigger an inspection, corrective action and a reporting requirement.	An excursion is defined as failure to perform the monthly or annual inspection of the multicyclone. Excursions trigger an inspection, corrective action and a reporting requirement.
<b>Quality Improvement Plan (QIP) Threshold</b>	NA	Upon completion of the initial testing conducted in accordance with EPA Method 5, no more than 6 excursions from the indicator range in a 6-month reporting period that corresponds with the Title V semi-annual reporting period.	NA
<b><u>Performance criteria:</u></b>			
<b>Data Representativeness</b>	Testing shall be conducted at three boiler firing rates. One of the firing rates shall be at the maximum expected operating firing rate of the boiler and the remaining two firing rates shall be based on normal expected operating firing rates.	Control efficiency is a function of inlet velocity and changes in velocity result in changes in pressure drop across the entire multicyclone unit. The differential pressure points are located at the inlet and outlet of the entire multicyclone unit and the gauges have an accuracy of +/- 5%	Each mulitcyclone shall be inspected visually for early detection of structure deterioration and required maintenance.
<b>Verification of operational status</b>	NA	NA	NA

Indicator	Indicator 1	Indicator 2	Indicator 3
	Performance Testing	Pressure Drop	Periodic Structural Inspections
<b>QA/QC practices and criteria</b>	Trained personnel to perform test. Test procedures shall be as required by EPA Method 5 (40 CFR 60, Appendix A). A test protocol shall be submitted to and approved by the Director, Valley Region, prior to testing. One copy of the test results shall be submitted to the Director, Valley Region, within 60 days after test completion.	Calibrate, maintain and operate the instrumentation in accordance with the manufacturer's specifications.	Trained personnel perform the inspection and maintenance.
<b>Monitoring frequency and data collection procedure</b>	The test shall be performed within 6 months of the issuance of the permit and once every five years thereafter.	Measured and recorded continuously.	Record results of monthly and annual inspections of each multicyclone.

## ATTACHMENT B – HAZARDOUS AIR POLLUTANT LIST

Note 1: Emissions for pollutant listings which do not have a specific CAS number must be totaled when determining major source applicability under Title V and for HAP regulations (i.e. 112(g) & (d)).

<u>CAS#</u>	<u>NAME</u>
see Note 1	ANTIMONY COMPOUNDS <sup>1</sup>
see Note 1	ARSENIC COMPOUNDS
see Note 1	BERYLLIUM COMPOUNDS
see Note 1	CADMIUM COMPOUNDS
see Note 1	CHROMIUM COMPOUNDS
see Note 1	COBALT COMPOUNDS
see Note 1	COKE OVEN EMISSIONS
see Note 1	CYANIDE COMPOUNDS <sup>2</sup>
see Note 1	GLYCOL ETHERS <sup>3</sup>
see Note 1	LEAD COMPOUNDS
see Note 1	MANGANESE COMPOUNDS
see Note 1	MERCURY COMPOUNDS
see Note 1	NICKEL COMPOUNDS
see Note 1	POLYCYCLIC ORGANIC MATTER/POM <sup>4</sup>
see Note 1	SELENIUM COMPOUNDS

<u>CAS#</u>	<u>NAME</u>
50 00 0	FORMALDEHYDE
51 28 5	2,4-DINITROPHENOL
51 79 6	ETHYL CARBAMATE/URETHANE
53 96 3	2-ACETYLAMINOFLUORENE
56 23 5	CARBON TETRACHLORIDE
56 38 2	PARATHION
57 14 7	1,1-DIMETHYLHYDRAZINE
57 57 8	BETA-PROPIOLACTONE
57 74 9	CHLORDANE
58 89 9	LINDANE (AND ALL OTHER STEREOISOMERS OF 1,2,3,4,5,6- HEXACHLOROCYCLOHEXANE)
59 89 2	N-NITROSOMORPHOLINE/NMOR
60 11 7	DIMETHYL AMINOAZOBENZENE/ 4-DIMETHYLAMINOAZOBENZENE
60 34 4	METHYL HYDRAZINE
60 35 5	ACETAMIDE
62 53 3	ANILINE & HOMOLOGUES
62 73 7	DICHLORVOS
62 75 9	N-NITROSODIMETHYLAMINE/NDMA
63 25 2	CARBARYL
64 67 5	DIETHYL SULFATE

67	56	1	METHANOL
67	66	3	CHLOROFORM
67	72	1	HEXACHLOROETHANE
68	12	2	DIMETHYLFORMAMIDE/ N,N-DIMETHYLFORMAMIDE
71	43	2	BENZENE (INCLUDING BENZENE FROM GASOLINE)
71	55	6	METHYL CHLOROFORM/1,1,1-TRICHLOROETHANE
72	43	5	METHOXYCHLOR
72	55	9	2,2-BIS(P-CHLORPHENYL)-1,1- DICHLOROETHYLENE/DDE
74	83	9	METHYL BROMIDE/BROMOMETHANE
74	87	3	METHYL CHLORIDE/CHLOROMETHANE
74	88	4	METHYL IODIDE/IODOMETHANE
75	00	3	ETHYL CHLORIDE/CHLOROETHANE
75	01	4	VINYL CHLORIDE/CHLOROETHYLENE
75	05	8	ACETONITRILE
75	07	0	ACETALDEHYDE
75	09	2	METHYLENE CHLORIDE/DICHLOROMETHANE
75	15	0	CARBON DISULFIDE
75	21	8	ETHYLENE OXIDE
75	25	2	BROMOFORM
75	34	3	1,1-DICHLOROETHANE/ETHYLIDENE DICHLORIDE
75	35	4	VINYLDENE CHLORIDE/1,1-DICHLOROETHYLENE
75	44	5	PHOSGENE/CARBONYLCHLORIDE
75	55	8	1,2-PROPYLENE IMINE
75	56	9	PROPYLENE OXIDE/1,2-EPOXYPROPANE
76	44	8	HEPTACHLOR
77	47	4	HEXACHLOROCYCLOPENTADIENE
77	78	1	DIMETHYL SULFATE
78	59	1	ISOPHORONE
78	87	5	PROPYLENE DICHLORIDE/1,2-DICHLOROPROPANE
79	00	5	1,1,2-TRICHLOROETHANE
79	01	6	TRICHLOROETHYLENE
79	06	1	ACRYLAMIDE
79	10	7	ACRYLIC ACID
79	11	8	CHLORACETIC ACID
79	34	5	1,1,2,2-TETRACHLOROETHANE
79	44	7	DIMETHYL CARBAMOYL CHLORIDE
79	46	9	2-NITROPROPANE
80	62	6	METHYL METHACRYLATE
82	68	8	PENTACHLORONITROBENZENE/QUINTOBENZENE
84	74	2	DIBUTYL PHTHALATE
85	44	9	PHTHALIC ANHYDRIDE
87	68	3	HEXACHLOROBUTADIENE
87	86	5	PENTACHLOROPHENOL

88	06	2	2,4,6-TRICHLOROPHENYL
90	04	0	O-ANISIDINE
91	20	3	NAPHTHALENE
91	22	5	QUINOLINE
91	94	1	3,3'-DICHLOROBENZIDENE
92	52	4	BIPHENYL
92	67	1	4-AMINODIPHENYL
92	87	5	BENZIDINE
92	93	3	4-NITRODIPHENYL
94	75	7	2,4-D, (DICHLOROPHENOXY/ACETIC ACID) (INCLUDING SALTS AND ESTERS)
95	95	4	2,4,5-TRICHLOROPHENOL
95	47	6	O-XYLENE
95	48	7	O-CRESOL
95	53	4	O-TOLUIDINE
95	80	7	2,4-TOLUENE DIAMINE/TOLUENE-2,4-DIAMINE
96	09	3	STYRENE OXIDE
96	12	8	1,2-DIBROMO-3-CHLOROPROPANE
96	45	7	ETHYLENE THIOUREA/ETU
98	07	7	BENZOTRICHLORIDE
98	82	8	CUMENE
98	86	2	ACETOPHENONE
98	95	3	NITROBENZENE
100	02	7	4-NITROPHENOL
100	41	4	ETHYL BENZENE
100	42	5	STYRENE, MONOMER/VINYL BENZENE
100	44	7	BENZYL CHLORIDE
101	14	4	4,4-METHYLENE BIS(2-CHLOROANILINE)
101	68	8	4,4'-METHYLENEDIPHENYL DIISOCYANATE/MDI
101	77	9	4,4-METHYLENE DIANILINE
106	42	3	P-XYLENE
106	44	5	P-CRESOL
106	46	7	1,4-DICHLOROBENZENE
106	50	3	P-PHENYLENEDIAMINE
106	51	4	QUINONE
106	88	7	1,2-EPOXYBUTANE
106	89	8	EPICHLOROHYDRIN
106	93	4	ETHYLENE DIBROMIDE/EDB/1,2-DIBROMOETHANE
106	99	0	1,3-BUTADIENE
107	02	8	ACROLEIN
107	05	1	ALLYL CHLORIDE
107	06	2	1,2-DICHLOROETHANE/ETHYLENE DICHLORIDE
107	13	1	ACRYLONITRILE
107	21	1	ETHYLENE GLYCOL
107	30	2	CHLOROMETHYL METHYL ETHER/CMME
108	90	7	CHLOROBENZENE

108	05	4	VINYL ACETATE
108	10	1	METHYL ISOBUTYL KETONE/HEXONE
108	31	6	MALEIC ANHYDRIDE
108	38	3	M-XYLENE
108	39	4	M-CRESOL
108	88	3	TOLUENE
108	95	2	PHENOL
109	59	1	ISOPROPOXYETHANOL <sup>3</sup>
109	86	4	2-METHOXYETHANOL <sup>3</sup>
110	54	3	HEXANE
110	80	5	2-ETHOXYETHANOL <sup>3</sup>
111	42	2	DIETHANOLAMINE
111	44	4	DICHLOROETHYL ETHER/ BIS(2-CHLOROETHYL)ETHER
114	26	1	PROPOXUR/BAYGON
117	81	7	DI-SEC-OCTYL PHTHLATE/ BIS(2-ETHYLHEXYL)PHTHALATE
118	74	1	HEXACHLOROBENZENE
119	90	4	3,3-DIMETHOXYBENZIDINE
119	93	7	3,3-DIMETHYLBENZIDINE
120	80	9	CATECHOL
120	82	1	1,2,4-TRICHLOROBENZENE
121	14	2	2,4-DINITROTOLUENE
121	44	8	TRIETHYLAMINE
121	69	7	DIMETHYLANILINE
122	66	7	1,2-DIPHENYLHYDRAZINE
123	31	9	HYDROQUINONE/DIHYDROXYBENZENE
123	38	6	PROPIONALDEHYDE
123	91	1	1,4-DIOXANE/1,4-DIETHYLENEOXIDE
126	99	8	2-CHLORO-1,3-BUTADIENE/BETA-CHLOROPRENE
127	18	4	TETRACHLOROETHYLENE/PERCHLOROETHYLENE
131	11	3	DIMETHYL PHTHALATE
132	64	9	DIBENZOFURANS
133	06	2	CAPTAN
133	90	4	CHLORAMBEN
140	88	5	ETHYL ACRYLATE
151	56	4	ETHYLENIMINE
156	62	7	CALCIUM CYANAMIDE
302	01	2	HYDRAZINE
334	88	3	DIAZOMETHANE
463	58	1	CARBONYL SULFIDE
510	15	6	CHLOROBENZILATE
532	27	4	2-CHLOROACETOPHENONE
534	52	1	4,6-DINITRO-O-CRESOL (INCLUDING SALTS)
540	84	1	2,2,4-TRIMETHYLPENTANE
542	75	6	1,3-DICHLOROPROPENE

542	88	1	BIS-(CHLOROMETHYL) ETHER
584	84	9	TOLUENE-2,4-DIISOCYANATE/TDI
593	60	2	VINYL BROMIDE
624	83	9	METHYL ISOCYANATE
680	31	9	HEXAMETHYL PHOSPHORAMIDE/HMPA
684	93	5	N-NITROSO-N-METHYLUREA/NMU
822	06	0	HEXAMETHYLENE DIISOCYANATE
1120	71	4	1,3-PROPANE SULTONE
1319	77	3	CRESOLS/CRESYLIC ACID
1330	20	7	XYLENE ISOMERS AND MIXTURES
1336	36	3	POLYCHLORINATED BIPHENYLS/AROCHLORS
1582	09	8	TRIFLURALIN
1634	04	4	METHYL TERT BUTYL ETHER
1746	01	6	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN
7550	45	0	TITANIUM TETRACHLORIDE
7647	01	0	HYDROGEN CHLORIDE/HYDROCHLORIC ACID (GAS ONLY)
7664	39	3	HYDROGEN FLUORIDE/HYDROFLUORIC ACID
7723	14	0	PHOSPHOROUS
7782	50	5	CHLORINE
7803	51	2	PHOSPHINE
8001	35	2	TOXAPHENE/CHLORINATED CAMPHENE

The following pollutants and pollutant source categories are listed as HAPs under section 112(b) but are excluded from the definitions of toxics in the Virginia Regulations:

- A. Asbestos NESHAP, 40 CFR 61 Subpart M (for asbestos removal, demolition and installation contact Virginia Department of Labor - 804/786-8009).
- B. Fine Mineral Fibers.
- C. Radionuclides (including radon).

<sup>1</sup> For all listings above which contain the word “compounds” and for the glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical’s infrastructure.

<sup>2</sup> X'CN where X = H' or any other group where formal dissociation may occur. For example, KCN or Ca(CN)<sub>2</sub>.

- 3 Glycol ethers include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol  $R-(OCH_2CH_2)_n-OR'$  where:

$n = 1, 2, \text{ or } 3$

$R = \text{alkyl C7 or less, or phenyl or alkyl substituted phenyl}$

$R' = H, \text{ or alkyl C7 or less, or carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate}$

2-Ethoxyethanol, Isopropoxyethanol, and 2-Methoxyethanol meet this definition, but are considered as only one HAP (glycol ethers) for Title V and CAAA §112 purposes. They are also listed individually in this table as a reminder that because they have TLVs, they must be considered separately under Virginia's Toxic Pollutant regulations (9 VAC 5 Chapter 60, Articles 4 and 5).

- 4 Includes substituted and/or unsubstituted polycyclic aromatic hydrocarbons and aromatic heterocycle compounds, with two or more fused rings, at least one of which is benzenoid in structure. Polycyclic Organic Matter is a mixture of organic compounds containing one or more of these polycyclic aromatic chemicals which include dioxins and furans. Polycyclic Organic Matter is generally formed or emitted during thermal processes including (1) incomplete combustion, (2) pyrolysis, (3) the volatilization, distillation or processing of fossil fuels or bitumens, or (4) the distillation or thermal processing of non-fossil fuels.